



New Year Awards

The Sir Keith Joseph Prize to all residents of the UK for person demonstrating and unreserved commitment to the idea of universities as contributors to the economy. Winner: Sir Keith Joseph. Report: This is the second year in succession in which this prize has been awarded the prize. If he is successful for a third year in 1986 he will become an outright owner of Buckingham University.

The Turncoat Award for the person who despite a few token noises has been most public in his reaction to the Green Paper on Higher Education in the 1990s and who has shown himself most ready to go along with the reaction. Winner: Mr. Reg Pulteney of the AUT central office.

The Rhodes Boyson Medal for relatively unknown Members of Parliament who have been shunted into higher education until: a) something better turned up, b) they are dropped entirely, c) they actually resign. Winners: 1. George Walder, 2. Peter Brooke, 3. What'sname.

The Sir Alex Jarratt Award for pioneering techniques of efficiency and cost-cutting in universities which would quite frankly be more suitable in a biscuit factory. Winner: Jacobs Cream Cakes.

The Doctor Pangloss Award for managing to come into work during 1985 and act as though nothing whatsoever was happening to the entire fabric of higher education in this country. Winner: No outright winner. Report: Not such a large entry as last year but nevertheless over 1,500 nominations from almost every department in the country. A special mention for all those candidates who are already going around attacking the Day of Action as "irrelevant".

The Tarnished Mace Award for the university which during 1985 showed itself most anxious to adapt to the realities of higher education in the late 1980s. Winner: Keele Polytechnic.

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Research study proposed

by Jon Turney
 Science Correspondent

The Advisory Board for the Research Councils is to consider proposals for a new study of the research strengths of every Government-funded scientific institution in the UK.

The proposal, which would cover all universities, polytechnics, research council establishments and probably include laboratories run by Government departments, call for "research profiles" to be drawn up using data on research publications, and on their influence.

The output from such a study would be assessed as a possible supplement to traditional peer review in judgements about the strengths and weaknesses of different research centres, and would have an obvious bearing on development of the University Grants Committee's new selective research policy.

Plans for the study have been drawn up by the ABRC's chairman Sir David Phillips, and have not yet been considered by the full board. They follow smaller studies carried out in 1984 to assess the research output of research output indicators. Of the techniques tried, the results from relatively straightforward analysis of publication and citations are left to show method in use on David's own field of protein crystallography.

The larger study now proposed would use data from the Science Citation Index which covers 3,000 journals divided into nine fields of science and 106 sub-fields. Computer analysis of the data gives lists of publications for each institution, and they are then given an influence weighting derived from the journals in which they appear.

This weighting, which depends on the overall citation performance of each journal, is easier to apply than counting citations for individual papers, and gives results for more recent papers.

If the study goes ahead, it is likely to cover output from UK scientific institutions in 1983 and 1984, which should give enough papers to produce a valid result in most cases. The proposals stress that the profiles drawn up will need careful interpretation, but they should permit some comparisons between individual universities, between university and research council establishments, and between civil laboratories supported by the Department of Education and Science and by other departments.

The work would be carried out by the American firm Computer Horizons Inc, which produces detailed analyses of American scientific output from the Science Citation Index for the US National Science Foundation's long-standing programme of science indicators. If the first run is successful, the work could easily be extended to offer comparisons between British and foreign laboratories.

The inflated claims of social scientists were partly to blame for the public scepticism about universities leading up to the 1981 cuts, Sir Peter told a conference of members of the Association of Learned Societies in the Social Sciences.

He himself did not understand what the social sciences had in common that distinguished them from the humanities, and on that basis the UGC did not have a policy for the social sciences distinct from the humanities.

But the move in the sciences since 1981 from ivory tower research to strategic research had considerably improved the universities' image in Whitehall, Westminster and the mind of the taxpayer, not least because the universities had kept a low profile.

The spotlight might now turn to the humanities. "Sir Keith Joseph has not forgotten the existence of social sciences, nor is he convinced you have changed your spots in any way," he said.

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Pay talks follow protest strike

by THES reporters

Vice chancellors meet today to try to resolve the 10-month deadlock over academic salaries following Wednesday's first-ever strike by university teachers.

The finance and general purposes subcommittee of the Committee of Vice Chancellors and Principals will decide whether the universities can afford to make an improved offer at Monday's meeting of committee A, the first stage in the national machinery for negotiating academic salaries.

They may decide to offer a phased deal, but are concerned about the financial implications for their hard-pressed universities. The Association of University Teachers is also eager to reach a settlement to clear the decks for its 1986 salary campaign. At present university teachers are being paid an interim 4 per cent increase.

The AUT claimed that around 75 per cent of its members supported Wednesday's strike, although some universities seemed to be little affected by the industrial action. The original call for a strike was supported by 55 per cent of those AUT members who voted in a pre-Christmas ballot, but only a third of the association's total membership.

Some vice chancellors were individually more forthcoming than others in their support. Professor John Norbury, acting vice chancellor at Liverpool, told his staff he would be coming into work but would not draw his salary for the day.

Lectures and classes were cancelled, and many students stayed away from the few that did take place. At Manchester examinations were postponed and a joint rally with the National and Local Government Officers' Association, which also called for strike action, was held.

Keele was forced to defer a vital meeting of the main subcommittee of its senate when the deputy vice chancellor announced he would join the strike. At Southampton, the vice chancellor was among speakers at a meeting organized by the AUT.

An international conference of university teaching unions in Helsinki last week expressed support for the AUT.

A declaration signed by 35 union representatives from North America, Scandinavia, France and Ireland said that tenure funding for research and teaching and reasonable salary scales "are fundamental prerequisites for academic freedom and progress in research".

More than 3,000 members of the 4,500-strong Association of University Teachers in Scotland were on strike. Ninety per cent of members were on strike at Aberdeen's main campus where virtually no lectures took place.

The AUT mounted picket lines at all Scottish universities except Dundee, although Dundee's administration was substantially affected by a strike by Nalga members. Dundee's AUT backed a series of "parallel action" including a 24-hour hunger strike intended to symbolize the starvation of university resources.

At several universities lectures had not started, while at others a normally quiet day was made quieter still by the strike. Sussex was one university reporting patchy support for the action, while at Salford a large majority of the staff was said to be working normally.

All the main entrances of Durham were picketed and Professor Richard Brown, Durham AUT president, said very few people had crossed the lines. At Exeter, a university spokeswoman said 90 per cent of students and staff had supported the action, and the university was "virtually at a standstill".

Delivery vehicles and buses were turned back at joint AUT and Nalga picket lines in Lancaster. Ms Diana Warwick, general secretary of the AUT, said: "This action is an unprecedented response to an unprecedented crisis."

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Adm
 In May, the UGC confirmed its RESEARCH SELECTIVITY exercise and asked the universities to submit their research strengths and priorities. In a two-page report, Peter Aspdren gives the background to the decision and considers the university submissions (pages 10 & 11)

Will INDUSTRY YEAR be allowed to lapse back into the oblivion usually reserved for such theme years? Or does it represent a genuine chance of redeeming Britain's traditional anti-industrial bias? Carolyn Dempster looks at the prospects (page 12)

The ENGLISH HISTORICAL REVIEW, that most respected (and occasionally feared) of history journals, celebrates its centenary this month. Ian Bradley looks back at its own remarkable history (page 13)



Building blocks and superstrings: John Charap looks at the search for a unified theory of matter and physical processes and at the latest, and dramatic, developments in THEORETICAL PHYSICS (pages 14 & 15)

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The UGC in purdah

The University Grants Committee is now in planning purdah. It has received the bids from universities in reply to its circular letter of last May on planning for the late 1980s. The UGC's subcommittees at present are examining the universities' own estimates of their strong (and weak) research areas. A little later the main committee will try to match the conclusions which the subcommittees reach about the future academic pattern of the university system to the student number targets and financial forecasts that have also been provided by the universities in their replies. Finally later in the spring the UGC will take its final decisions about the allocation of the dwindling recurrent grant.

The importance of the decisions now being gestated by the UGC should not be underestimated. For many universities they will be make-or-buy decisions. During the next few weeks the UGC will decide whether they face secure or precarious futures, whether they can maintain a traditional balance between teaching and research across a comprehensive range of disciplines or whether they will be forced into cruel choices. In the history of Britain's universities the spring of 1986 almost certainly will come to be regarded as a decisive time when irreversible steps were taken towards the creation of a stratified system.

Some dispute this claim. They believe the importance of the decisions which now face the UGC. They point out that the committee has little room for manoeuvre in practice. The fortunes of universities, they argue, are predetermined by their deeply embedded academic strengths, which have been built up over years and decades and which the UGC can do little to change in weeks and months; by the random pattern of retirements, which is the act of some impartial actuarial God and again beyond the effective reach of the UGC; and by their responses, sensible or ill-judged, to the 1981 cuts which cannot now be recalled.

Others argue that the coming distribution of the recurrent grant by the UGC will be no more selective than previous distributions. Indeed it may well be less selective, because the UGC has agreed that no university will have its grant cut by more than 1½ per cent in excess of the average reduction.

Real as these constraints on the UGC's present discretion are, they do not detract from the importance of the committee's coming decisions. For two new factors have intervened which magnify their significance. The first is that on any reasonable estimate the universities face a decade of austerity. No real relief is likely to come before the demographic pressure on student numbers begins to increase again in the mid-1990s, whatever may happen at Westminster. So any decisions taken in 1986 cannot be easily or quickly reversed. The UGC will have no spare money even if it has second thoughts.

The second is that the UGC's new discrimination will be exercised out in the open in the public gaze. In the past the committee was selective in private but it did nothing to disturb the fiction that all universities were alike. In future it will be selective in public and the action will be exposed. Not only will the significance of the UGC's discrimination be much greater because the pattern of winners and losers will be plain for all to see; but also in an openly acknowledged hierarchy of universities success will breed success and failure will be compounded by failure. Indeed the UGC is relying on both effects. It wishes not only to be selective but to be seen to be selective (most especially by present ministers), and it assumes that the pattern of selectivity it establishes will create its own momentum. Didn't someone recently talk about the "virtues of publicity"? Well, the UGC is relying on that oxygen in its planning.

Because the exercise in which the UGC is engaged is likely to have such important and maybe irreversible consequences it is important to be clear about the character of this exercise. Some people say that the committee has embarked on an unprecedented task, that for the very first time it is trying to plan the development of the universities. This judgement is unfair to previous UGCs and, although it is clearly expedient that politicians, their anti-university neuroses having been aroused, should be persuaded to believe this version. In fact the substance of what the UGC is attempting is unremarkable.

however novel its style may be. Like all previous UGCs the committee is trying to produce a better match between the distribution of resources and the universities' pattern of academic strengths and weaknesses. There is no evidence that the present committee is purporting to define academic quality in any but the most traditional terms; its alleged "politicization" remains peripheral and presentational. Nor is there much evidence that the UGC has abandoned old "informed judgement" as the means by which it makes judgements about quality; since the arrival of the National Advisory Body formula funding has become inescapable but neither it nor the mountains of paper sent in by universities in reply to committee circulars should deceive.

Amid all the talk of revolution the continuity of UGC policy needs to be emphasized. Old wine in new bottles is not too unfair a description. Since 1981 the policy of the committee has had two strands. The first is to continue the rationalization, begun in that year. A new criterion, that of political acceptability, has been added but the aims of that rationalization in terms of favoured institutions and favoured disciplines have not really varied. The second is that the UGC should act out in public. The motives for this are confused - to educate the universities in the austere realities, to disarm opposition through exhausting consultation, to put pressure on the Government.

The difficulty for the UGC is to knit these two strands into a single rope, a coherent policy for universities in the late 1980s and early 1990s, that commands consent. For there is a danger that the two may never be joined. As it is down to contemplate the piles of university replies, most of which inevitably contain little illumination or novelty, the UGC may be tempted to conclude cynically that such consultation is pointless in terms of planning. It is going too far to say that the UGC may have had a prior good idea of what decisions would emerge. But it is clear that the elaborate exercise has led either party, the universities or the UGC, to re-examine its preferences.

For industry's sake

There are also signs that industry is prepared to put more into higher education, into high technology at any rate. The vaunted new partnership launched by Mr John Butcher's successive reports on skill shortages looks like producing concrete results in donations of equipment and staff time. Further afield, there is surely scope for improving our collective image of industry, if only because industry itself is changing - under the influence of new technologies which cannot tolerate the grime, heat and disorder which manufacturing still conjures up for many.

Yet the campaign rhetoric still invites scepticism on other grounds. If tradeable services want to attract more of the best graduates into making and selling, they might do better to put more faith in market forces and less in glossy brochures and the rest of the apparatus of modern public relations.

Some of the brightest and best surely favour accountancy, investment analysis or the law out of a taste for making money rather than a distaste for getting their hands dirty.

In addition, the campaign is based on a claim that the low social opinion of industry in Britain is the cause of our relative economic decline. But there are many other features of British life which set us apart from our principal competitors, not least our comparative lack of regard for higher education. Perhaps the Committee of Vice Chancellors and Principals should start working now on a paraphrase of the rubric for the Industry Year campaign, among the public a better understanding of universities, their essential role and service to the community, and to win acceptance for them. In the meantime, higher education had best be seen making a contribution to industry's campaign.

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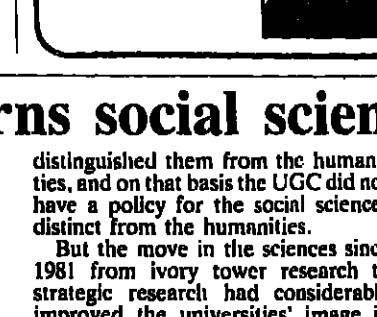
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Strikes and protests

public virtues today. It will be said that the gentility of such action will simply demonstrate, to cynical critics, the leisurely pace of themselves, and, they have no real trade union muscle. True again. It will also be said that a Government preoccupied to tolerate the disorganization of the entire school system and the demoralization of teachers will probably not even notice a one-day semi-strike by university teachers. True again. But there are greater truths that

swallow up these smaller ones. University teachers' salaries have fallen further and further behind the pay of their peers, with disastrous consequences for the integrity of the profession. And if the cuts continue, the traditional quality of Britain's universities will be placed in irreversible jeopardy. Some protest has to be made. Those who criticize the propriety or success of the full-time Association of University Teachers' one-day strike must suggest a more effective alternative.

Trotskyist of the American new right: S.M. Lipset, 13



Sir Peter warns social scientists to lie low

by Karen Gold

Social scientists still have to answer the question of whether taxpayers' money is usefully spent on their subjects, according to the University Grants Committee chairman, Sir Peter Swinerton-Dyer.

The inflated claims of social scientists were partly to blame for the public scepticism about universities leading up to the 1981 cuts, Sir Peter told a conference of members of the Association of Learned Societies in the Social Sciences.

He himself did not understand what the social sciences had in common that distinguished them from the humanities, and on that basis the UGC did not have a policy for the social sciences distinct from the humanities.

But the move in the sciences since 1981 from ivory tower research to strategic research had considerably improved the universities' image in Whitehall, Westminster and the mind of the taxpayer, not least because the universities had kept a low profile.

The spotlight might now turn to the humanities. "Sir Keith Joseph has not forgotten the existence of social sciences, nor is he convinced you have changed your spots in any way," he said.

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Pickets at Essex University stop a car at the entrance to the campus

sities but because I feel I am expressing the enormous anger which has built up over the years at the way universities and the staff who work in them have been treated.

"If we can just show the Government and the wider public what this anger is, people might start taking more notice of us."

Vice chancellor Dr Albert Sloman crossed the picket line on his way to work at 8.30



I made a reference at the end of a recent column to Peter Anson, from whose cottage in Macduff I had set out day after day to explore the coast and the farms of Banffshire in the mid-1950s when I was assembling material for a PhD thesis on the north-east lowlands of Scotland. That reference provoked a letter from Professor Pennington of the department of bacteriology in the University of Aberdeen, who like many another academic has a cottage on the coast, in his case at Whitehills. He is interested in Peter Anson and asks for more about him.

Peter Anson was the most extraordinary character. He was, I understood, descended from the 18th-century Admiral Anson (who I see in the *Dictionary of National Biography* died without issue). That may have accounted for his undying fascination with boats. His collection of drawings of boats and of the fisher folk who fished for herring in the Scottish Fisheries Museum at Anstruther in Fife. But then Peter characteristically quarrelled with someone and took them all away; they can now be seen at Buckie.

The other more exotic, side of Peter Anson was his unrivalled knowledge of church furnishings and ecclesiastical monism. On the former subject nothing is better than his *Fashions in Church Furnishings* (1960) (I lent my copy to the owner of Castle Howard who promised to return it, wrote my name in it and lodged it in his library where it still remains). On the latter subject his *Blasphemy at Lurgie* (1964) is a mine of information.

Peter himself had been recruited by Abbot Aelred Carlyle to the abbey on Caldey Island. In his hesitant speech with a slight impediment, Peter used to describe the scene, while Carlyle throwing up towers whenever he extracted more money from a pious lady. When the community broke up after a famous row, not unconnected with boy oblates, most of the community, having become Catholics, moved to Prinknash. Peter also became a Catholic but left the order. Carlyle fled to Canada where he discovered a new vocation, looking after prisoners in the condemned cell, and left Vancouver with freedom of the city.

Carlyle then came back to England, calling first on Peter Anson in Macduff and then travelling to Prinknash after promising Peter that he would call again before he died. So when one night Peter heard in a storm a fearful hammering on the door in the early hours of the morning and found no one outside he had no doubt that Carlyle had called as he had promised and got up early and started writing the book about him which appeared in 1958 as *Abbot Extraordinary*. In fact Carlyle died at Prinknash at exactly the time the hammering was heard on the door. I was there in the box bed underneath the stairs and didn't hear a thing. But Peter did.

He was the most insatiable gossip and carried on a continuous correspondence with innumerable friends and enemies in many churches. I took him one day to Plasencade Pectory near Elgin, the daughter house of Prinknash, and monks who were old friends no sooner saw him than they were exchanging gossip of the most hilarious and dangerous kind. They must have known he would tell everyone but they couldn't resist it. Presumably they got good value in return.

Patrick Nuttgens

Letters to the editor

Gulf between intention and practice

Sir, - Professor Pinker's article in your issue of December 20, "Learning a lesson from Jasmine", raises bluntly the central dilemma of the social work profession. I played a small part in the reorganization of social work in Scotland following the Kilbrandon and Langley reports and have returned to an interest in the subject as chairman of the all party parliamentary panel for the personal social services.

I recognize only too sadly how wide is the gap between the intentions of the reorganizations and much of current social work practice. The changes introduced then recognized, among

others, two features in particular. The first was that it is an unusual family in which the problems which invite intervention from a social worker can be neatly compartmented into symptoms defined under separate Acts of Parliament. Is child abuse by mentally handicapped parents, for example, a matter for child care workers or for specialists in mental handicap?

The second was that there was a growing recognition at the time of the substantial amount of common material and technique in the early stages of training for all social workers and it seemed both economical and prudent

to grant all trainees, in a profession where they would frequently have to cooperate with social workers in other specialisms, the opportunity to meet and understand future colleagues.

What went wrong was, principally, the failure to follow up the clear intentions of the framers of the Acts on both sides of the border, to encourage specialist development on the basis of a generic training and early generic experience. In too many local authority departments, for example, the pursuit of specialist interests was actively discouraged. As a result, social work students were too often given the idea

that they should be expected to turn their hands to every form of work: from detached youth work to the mentally ill.

In that, Professor Pinker is absolutely right. It is also worth asking whether the Central Council for Education and Training in Social Work is doing the right job in the way, but to reject any attempt to provide a generic basis for all work training is to go too far.

Yours sincerely,
ANDREW ROWE MP,
House of Commons.



Academics or idols: Harrison Ford as Indiana Jones (left) and Jerry Lewis

Publishing record

Sir, - I am somewhat unhappy to report that, as predicted in my article (*THESE*, January 3), titles output did indeed break new records in 1985. In aggregate 52,994 books were published, and of these 41,254 were new titles, both figures representing roughly 2.5 per cent increases on 1984. Readers may be surprised to learn that whereas 1,824 of the aggregate titles were school textbooks, a much smaller number, 1,092 titles listed under religion, 3,655 under medical science, and 3,911 under political science. Coffee tables must also be groaning beneath the 1,300 books on art (mostly, no doubt to be remembered during 1986).

It is a well-known adage that a typical journal article is read by its author, his mother and his dog. I am not sure that this is true, but it is precisely who reads all these books is also of interest (a modest, fascination perhaps?) since these do seem to be rather too many of them for a typical medical student to keep up with. As I gaze wistfully at my own bookshelves, I have (not too) never felt that I have read anything of any value in any of them.

There can only be one solution to this problem. For one year there must be a moratorium on the publication of all books - except my own!

Yours faithfully,
PETER CURWEN,
Principal lecturer in economics,
Sheffield City Polytechnic.

Words of protest

Sir, - The reports on your front page (January 3) underline the importance of Shirley Williams' recent appeal to those in higher education to speak out more loudly with "the voice of indignation".

While your main headline refers to claims that student demand for higher education is likely to prove greater than previously assumed, you head an adjacent column with the sombre words "Resigned response on cuts". Worse, you describe as "a new mood of realism" the acceptance by, for example, the University of Hull, of a 27 per cent reduction in their staff.

On the same front page, we read that Sir Keith Joseph's requirement for "vocational" provision in the polytechnics has sustained - even at the cost of reductions "elsewhere" - this alleged non-vocational "where", which may be summarily sacrificed, he once again the humanities?

Are we becoming immune to a new-speak, which would manipulate us into believing that further cuts in the arts and humanities are a necessary part of "reality", since these subjects do not conform to some unknown criteria denoting what is "vocational" with indignation?

Yours faithfully,
H. G. SOUTHGATE,
School of Humanities,
Hartfield Polytechnic.

Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

Action men

Sir, - A notable addition to Richard Sheppard's list of "positively potent" action-man academics from American films (*THESE*, January 10) would be Harrison Ford's whip-wielding archaeologist Indiana Jones. In *Raiders of the Lost Ark*, he is seen not only to have a magnetic lecture-room presence (one of his female students has written "Love you" on her eyelids), but also to be able to secure unlimited government support for a bid to retrieve the Ark of the Covenant.

There is, however, a reverse side to this enviable screen image. In *The Nutty Professor*, Ford plays a new and devastatingly macho personality only by resorting (à la Dr Jekyll) to artificial stimulants which he creates in his lab. Of course, it could be argued that this presents an admirable instance of scholarly resourcefulness in the face of adversity, in which case Jerry Lewis also belongs on Richard Sheppard's list.

Yours faithfully,
DAVID HEAD,
Lecturer in German,
University of Bath.

NAB criticism

Sir, - Strange, Sir Keith Joseph's criticism of the National Advisory Body and its support for vocational provision particularly in science and technology (*THESE*, January 3). For Sir Keith's anger is not that the NAB has been attempting to "rationalize" (cut is the honest term) vocational and technical courses in teaching and in architecture, but that the recommended cuts in these disciplines have not been severe enough. Support indeed!

It seems that any excuse will do to save money. Certainly in architecture the case for closures has not been established. The transitory review was based on faulty and inadequate statistics (*THESE*, December 27) and the architecture takes working party provided no definitions of its criteria nor the means it used to arrive at its apparently arbitrary conclusions about provision.

Yours faithfully,
MICHAEL JENKS,
Senior lecturer, and ARCUK councillor,
Oxford Polytechnic.

Civil service

Sir, - Martin Bulmer (*THESE*, Letters, January 3) is mistaken if he thinks that anyone with "a third in PPE" is going to be acceptable to the Civil Service Commissioners. As I made clear in the first paragraph of my article, you have to have at least a lower second.

He also misses the central point I am making about the reason why Oxbridge candidates tend to do better than the people from redbrick. This is closely linked to our style and method of teaching, and is a serious point which deserves serious discussion.

Yours faithfully,
PHILIP THODY,
Department of French,
University of Leeds.

Double cash victory for Open University

by Felicity Jones

The Open University this week won a modest victory with the announcement of an increased grant level and financial incentives which will involve the university in a significant shift towards science and technology.

The visiting committee's report to the Secretary of State for Education and Science warned that there would be a £2.9 million gap over the next two years between resources and the funding needed to maintain the volume of the undergraduate programme.

In the grant letter to Dr John Horlock, the vice-chancellor, it is stated that particular note had been

taken of the funding gap which would need to be bridged for the university to maintain both the volume and the quality of its operations.

The university's recurrent grant for this year has been increased by £625,000 and by a similar amount next year, which goes some way towards bridging that gap.

The extra money will also cover three new appointments for "new blood" and information technology schemes, and the additional costs of services for the larger numbers of disabled students.

Outside the recurrent grant the OU has been given some considerable

concessions towards investment in new technology to update its administrative performance and towards putting the continuing education work on a footing for growth.

Capital money for new technology of £750,000 is to be made available over the next three years. The £2.5 million loans under PICKUP, the Government's professional, industrial and commercial updating initiative, are to be converted into grants and the Secretary of State confirmed that new arrangements will be introduced to allow the university to retain income earned above grant.

The Government has accepted the

visiting committee's advice that maintenance of quality is paramount and the course profile should be reduced in the future but every effort should be made to maintain student numbers.

It stresses that any reduction in courses should not affect science and technology for which additional money has been found. The BBC/OU production centre is to search for income from external sources to use spare capacity in its studios.

The Government-appointed visiting committee disagreed with the allowance made for inflation to calculate the grant and said it believed that a

limited reduction in subjects could be sustained.

Dr Horlock greeted the news of the grant as a modest temporary respite but said the increase was still insufficient. He was disappointed that the capital grant for buildings and equipment was a third of that earmarked.

Mr Clement Freud MP, elected vice-president of the OU students' association said: "It is not often these days that there are grounds for cautious optimism in education as comes with this announcement. The huge response to the early day motion in defence of the OU may have contributed."

NAB plan for more even spread of cuts

by John O'Leary

No subjects will be fully protected from cuts in this year's National Advisory Body planning exercise if a working group's recommendations for a change of policy are accepted.

The influential Chairman's Study Group decided this week that the scale of the cuts now expected in 1987-8 made its existing policy of limiting economies to a range of subjects in the arts, social sciences and non-vocational disciplines unworkable. Cuts of 40 per cent might be required.

However, the group recommended a compromise, rather than treating all subjects equally. In order to maintain the NAB's shift of resources into science, technology and business subjects, it favoured a system in which priority subjects would be offered a "medium level of protection".

The group decided that planning should proceed on the assumption that no extra money will be forthcoming from the Government. Contingency plans will be made for dealing with less serious cuts.

New calculations were produced for this week's meeting to take account of the insistence of Sir Keith Joseph, Secretary of State for Education and Science, that the Government could not be expected to fund the lecturers' pay award.

A paper presented to the group concluded: "The essential point that emerges is that if catastrophic cuts of over 50 per cent of the provision in some programmes are to be avoided, the reduction must be much more evenly spread." Highly protected programmes might take a 10 per cent cut in intakes, while the remainder lost 30 per cent of places.

Late influx optimism

The late influx of university applications has given a more optimistic light on forecasts of a substantial drop in the number of home students for 1986 entry.

The University Central Council, Admissions has released figures which show that up to December 1, home student applications were down by 7.6 per cent, overseas applications up by 9.4 per cent, showing a total drop of 6.5 per cent.

But in the last fortnight before the UCCA deadline of December 15, it received nearly 44,000 applications, 3,500 more than in the corresponding fortnight last year. That means the total number of applications will be down by about 3 per cent. Latest breakdowns of home and overseas figures are not yet available.

Mr Michael Hiscock, head of applications at UCCA, said there had been a degree of alarm at early forecasts, but schools had done a "remarkable good job" in meeting the deadline in the face of political difficulties. These included the year-old teachers' dispute and a number of postal strikes in the Liverpool area.

The biggest drops in application numbers are in computer studies (down by 18.6 per cent), mathematics (18 per cent) and civil engineering (17.2 per cent). More popular subjects are accountancy (up by 11 per cent), law (0.3 per cent) and economics (1.5 per cent).

DES grant formula wrong, says WEA

The Workers Educational Association has put forward new proposals to try to win late changes in the funding formula being introduced by the Department of Education and Science.

The national executive of the WEA, expressing continuing opposition to the new system, has proposed that half the grants to its districts should be core money to cover field staff costs.

A quarter of the grant should be assessed on effective student hours while the remaining quarter would be distributed on criteria agreed with the DES to the 15 districts for the development of new course work.

The department has already started to phase in its new formula which is largely based on student hours - with some rebates for concessionary fees and a small sum for innovative work.

ILEA set to ignore polytechnic option for furniture college

by Rick Rogers

The Inner London Education Authority is proposing to ignore the working party report on the future of the London College of Furniture because it fails to recommend the college become part of the new London Polytechnic.

Mr Fletcher, chair of the ILEA's further and higher education sub-committee, argues that the working party study was an unfair exercise because the institute was not in existence during its deliberations. "It was not adequately able to explore the option of the institute," he said.

The 20-strong working party of ILEA, LCF and City of London Polytechnic representatives, looked at three options - merging with one of the proposed East London tertiary colleges, becoming a faculty of the City of London Polytechnic, or joining the institute.

It opts for the polytechnic link because of its "long-term academic and organizational benefits and costs". It emphasizes the value of the polytechnic's expertise in business, management and accounting studies and its powerful resources in computing. It also lists the mutual links with local industry and community affairs, the close proximity of the polytechnic and a possible future tie-in with the City University to create "a large and broadly based institution as a major presence in East London".

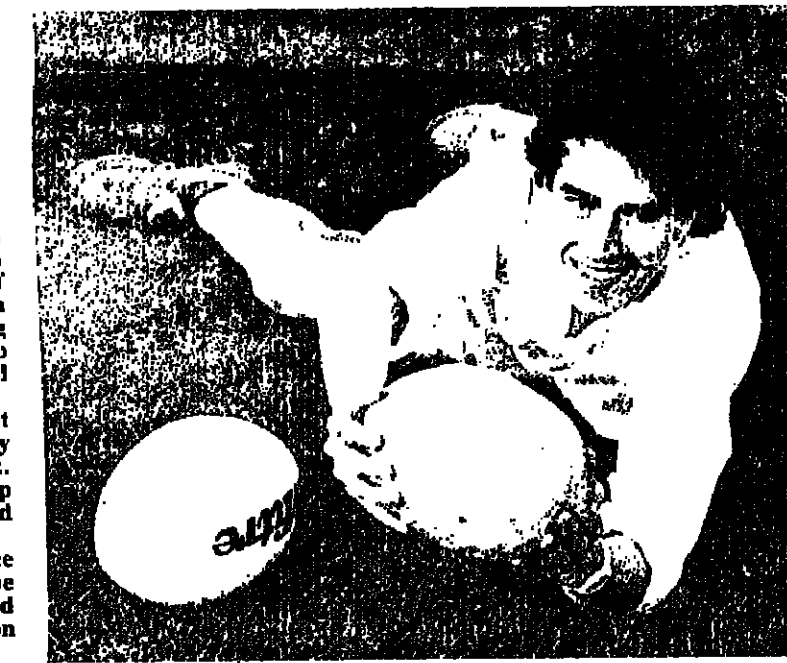
LCF principal Peter Metcalfe this week spoke of the college's exasperation at the new turn of events following two years of intensive consideration of the LCF's future. "We are now living from day to day," he said.

On the other side, if industry was serious about valuing a properly trained and educated workforce "it must demonstrate its seriousness with hard cash," he added.

"I appreciate that we have been through a recession and that industry has had to look for ways to cut its costs, but the surest way to stay in a recession is for companies to fail to invest sufficient of their resources in the future and the best investment that companies can make is in their workforce."

Industry Year '86 was an opportunity to turn the vicious cycle existing between industry and education into a "virtuous circle" with the one sector treating the other as a vital element in a single partnership.

"The 16 to 19 period" must be



Hothouse of Lemon Aid

Britain's largest lemon college has been grown at Pershore College of Horticulture in Worcestershire.

The 4th 11oz monster, two feet in circumference, grew to maturity in the college's hothouse collection of botanical specimens. Technician Gareth Hughes (pictured grappling with the lemon) says: "It received no special attention and is the normal commercially grown specie."

As big as a rugby football, it exceeds the previous record, held by an Oxfordshire man, by a clear 11oz. But it had a long way to go to catch up with the world record of 8lb 8oz, held by growers in California.

After a planned TV appearance this week, the lemon was due to be sacrificed to charity - after Live Aid and Band Aid, what else but Lemon Aid?

refuse to join the new institute, established on January 1 and combining Cumberwell, Central, Chelsea, St Martin's, and the London Colleges of Fashion, Printing, and Distributive Trades on a collegiate basis. The ILEA set up the working party last May in an attempt to resolve the LCF's future.

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DON'S DIARY

SATURDAY

Catch up on back numbers of *The Times*. For a while in Don's Diary it seemed to be *de rigueur* to write about your travels. Things being inverted down under, I shall talk about visitors, in which the week ahead, not untypically, promises to be rich.

Then a drive and picnic in the country. If your physical environment matters to you, then parts of the Australian interior come as something of a shock. It takes a while before you see the haunting beauty in the scene of Dallesque desolation: often a single stark gumtree with mutilated limbs stretching out to the sky in pain, and bark like bleached bones, except when blackened through bushfire. The only sign of life sometimes a caving currawong.

Darwin was struck in the same way: glad to know I'm in good (well, relatively good) company. In the settlements, buildings give the impression of having been thrown up by people who had no intention of staying permanently. Canberra itself of course is a solid and tidy, though veriginously new town, where few of the present inhabitants were born, and many are *de passage*, but it comes as a restful and welcome relief from congested SE England.

SUNDAY

Branch for some colleagues and two visitors. One is Jean-Noël Rey, specialist in language teaching and French society, and the other a Romance linguist who will be joining the Italian Section of the Department. He will help to balance research interests in the Department as a whole, and should allow us to pursue further our embryonic links with the Department of Linguistics.

As soon as the last brunchers have left, I go to the university to meet applied linguist Evelyn Hatch, who comes to us on a Fulbright, only to find that she and the colleague who met her at the airport are on their way to my house. Find them eating the remains of brunch before Hatch, determined not to succumb to jet-lag, is whisked off to visit local kioles.

Clear up, change for dinner to meet visiting French-Canadian writer Roch Carrier. Am intrigued to know what language will predominate in Canadian High Commission. Despite High Commissioner's own knowledge of French, the visitor's reflex seems to be to switch to English in front of any Canadian officialdom: interesting.

MONDAY

After meeting of French section of the department, a talk to students by Roch Carrier, who feels that French is now so firmly established in Quebec that the clocks can never be turned back. I utter a silent prayer that his optimism is justified. Go on to a packed lecture at which Hatch presents an overview of recent research on second language acquisition. Then back to chair a session in which Carrier gives an entertaining reading of his work in English translation.

TUESDAY

Normal teaching including one session where Rey gives a lecture on life in a French village in our new integrated language-society first-year course. Meeting with Italian section to discuss next year's teaching. Domestic crisis: three-year-old has chicken-pox. She feels fine, but cannot go to her French-Australian pre-school. (Here parents camp overnight at La Oxford Street sales to get their children admitted to the bilingual French-Australian school—but then Canberra is perhaps not typical.)

WEDNESDAY

Three classes (of which one a visiting speaker from Paris) and a long talk

with a publisher's rep who has just seen all my friends and collaborators in Britain, and bears good wishes from and to them.

Lunch-time seminar by a visiting professor from Stonybrook on contemporary French and German philosophy. He deals mainly with institutional aspects, and with US responses to French and German philosophers. He points out that contact is easy, it being cheaper to fly New York - Paris than Canberra - Sydney. Pangs of Eurostalgia.

Chicken-pox forces me to miss visiting fellow's seminar on "Aristotle and Dream", which would surely have been relevant to my interest in Raymond Queneau, but I ask for a copy of the paper.

THURSDAY

Rise early to make chick-pea salad as contribution to French section lunch for distribution of Alliance Française prizes. Wander idly and without malice how many male heads of department do the same at busy time of year. (Follow with early call about possible exchanges and visitors to Bernard Hickey, visiting from Venice; more Europeans as he gives addresses of colleagues for me to contact in Italy.) Then full day of teaching, administering and eating.

Evening drinks for Hatch at colleague's house, with guests from various teaching and government institutions. One person tells of recent tour of remote areas of China in a mobile language laboratory. Does not such aid represent an intrusion? I wonder aloud how the inhabitants of Broken Hill (in darkest New South Wales) would react if a vanload of Chinese disembarked in the main street and exhorted them to do a week's intensive course in Mandarin. No one thinks it a reasonable analogy: we all know that everyone needs to learn English.

FRIDAY

No teaching today. Contemplate the future of Dutch in the department (not bright), and the possibility of a visitor from the GDR for next year. Phone conversation with Professor Di Pietro of Delaware to confirm details of his imminent visit, and especially of the round-table to be held on the Italian Language in the US and Australia. The other contributor will be Giovanni Carlini, now Professor of Italian at La Trobe, and yet another émigré (do I mean refugee?) from the University of Sussex.

Student then barges in to ask for hand-out, and begins to discuss an aspect of the course. It is positive that students here assume accessibility, presence and informality of lecturers. Less positive is the lack of specialization, and the small number of advanced students in languages. (Yesterday I took a class of three Year IV "Honours" students; they made perceptive comments about a text from *Mythologies*, but two of the three had not heard the name of Barthes. This will change next year with new courses.)

I go home late, after trying vainly to get to the end of some administrative chores. Another new lecturer in Italian, already *in situ*, is putting on a Dario Fo evening with students. As I want to recover my Italian, it would have been fun to go, but I have a Dean's questionnaire to work on at home. Just as I would have liked to go to a lecture on "Brunelleschi's Florence" given earlier in the week by Brian Moloney, visiting from Hull, but was thwarted by a meeting. The best things in life may be free, but there seldom seems to be time for them these days.

Still, as I cycle home along Canberra's splendid network of cycle paths, I get an unimpeded view of the clear southern night sky. The university here is rich in possibilities, with a wealth of seminars and other activities, if one can manage to get to them. I vow that next year I shall make more time for my own interests, I shall invent a machine that will chew up memos to shreds and spew back reams of faultless replies to the Faculty Office. I shall... I pedal harder through the crisp Canberra night, and decide that Australia is all right if you keep looking upwards.

Carol Sanders

The author is Head of the Department of Modern European Languages at the Australian National University, and is on leave for two years from the University of Sussex.

A case of second-degree merger

by John Perlman

Students who complete a four-year BA (Honours) degree through Hull University's Institute of European Studies could earn themselves a degree from either a French or German university in the process.

Hull, the University of Angers and the University of Osnabrück hope to launch a trilateral integrated European studies degree in 1987, where students would study for three years at one of the three universities, and then transfer to a second for the final year. They would be awarded a degree by both institutions.

Professor Robert Berkl, director of the Institute of European Studies, said he believed the envisaged degree was unique for universities, although similar schemes had been set up in business studies.

The degree would improve students' job prospects, because those wishing to work in another country would find it easier if they had a degree from a university of that country.

Students will be placed in industrial or commercial employment as trainee executives at the end of their third year, in the country where they

will be spending their final year. Professor Berkl said the degree, which includes political science, literature, languages and economics, was meant to be a high academic course, and not low business studies.

All three universities approved the degree in principle, are looking into the possibility of a fifth year leading to a master's degree awarded by all three universities.

Hull has exchanged students with Osnabrück since 1976 and with Angers since 1978.

Report condemns 'too quick' cuts in farm research

by Jon Turney

Science Correspondent

The first report from the new Priorities Board for Agriculture Research says recent cuts in Ministry of Agriculture research programmes were made too quickly for them to be managed properly.

The board, chaired by Sir Kenneth Durham of Unilever, was set up last year to offer advice to ministers and to the Agricultural and Food Research Council on priorities for the government's £160 million a year spending on research in this sector.

The criticism of the speed of reduction - cuts of £10 million in both 1986 and 1987 in the agriculture ministry's research and development spending were announced in last year's public spending plans - reflects Sir Kenneth's irritation at pressure put on the board to make quick recommendations during 1985, taking account of the effects of these new figures.

In the event, the board accepted recommendations from the ministry and the AFRC on where the cuts should fall, its report now says the timetable for the cuts gave cause for concern because management changes were needed to implement them efficiently, and there was too little time for industry to step in with extra money to compensate. However, the board says the scale of the cuts is not large enough

to threaten the essential research base. In the board's view, the only way of increasing industrial funding for agriculture R and D is through a levy system, preferably including both procedures and processors.

The report also develops detailed criteria for assessing priorities in agricultural research, including the output value of different sectors, the UK's competitive position, social and political influences - from trends in diet to public opinion on environmental impact - and scientific potential.

Using these criteria, the board makes recommendations for shifting resources between sectors, with the main change being a 30 per cent increase in food research, raising its share of the total from 10.5 per cent in 1984/85 to 13.5 per cent - no date is specified for reaching this level.

The increase would benefit all parts of food research including food safety and nutrition. It would be at the expense of reductions in most other areas, except crop production, which the board recommends should see a smaller increase.

Priorities Board for Research and Development in Agriculture and Food. First report to the agriculture ministers and the chairman of the AFRC. MAFF Publications Unit, Lion House, Wiltonburn Trading Estate, Alnwick, Northumberland (£4.25).



Heart transplant surgeon Dr Christian Barnard visited North East London Polytechnic this week to look at the poly's bioelectric therapy research unit. The unit's work in electrical stimulus of the brain to control pain and addiction was "the most exciting piece of research I have seen in 20 years", said Dr Barnard, who will be working with the unit in the next clinical trial stage. He is pictured here with the unit head, Professor Ifor Capel.

Colleges to offer new BEd in technology

Scotland's two largest colleges of education, Jordanhill and Moray House, have been bidders by three other institutions to run new BEd degrees in technology.

Mr Allan Stewart, Scottish Office minister for industry and education announced this week, that from 1987, Moray House (jointly with Napier College of Technology) and Jordanhill (jointly with Glasgow University) will offer the new four-year degree course, which will have an initial student

intake of 60.

The unsuccessful bids came from Dundee and Aberdeen Colleges of Education and Stirling University, but the Scottish Education Department has said that if the annual intake has to rise significantly, revised bids for a third course will be invited.

The degree has been introduced as part of the SED move towards an all-graduate teaching profession. Until now students have taken a two, three or four-year diploma in a subject

education.

The new degree will be offered at both ordinary and honours level, with entry requirements broadly equivalent to those for a first degree in engineering or the applied sciences. Students will divide their time between the education college and sister institutions and will undertake both industrial placements and school experience. The SED expects to issue a consultative paper soon on future training in

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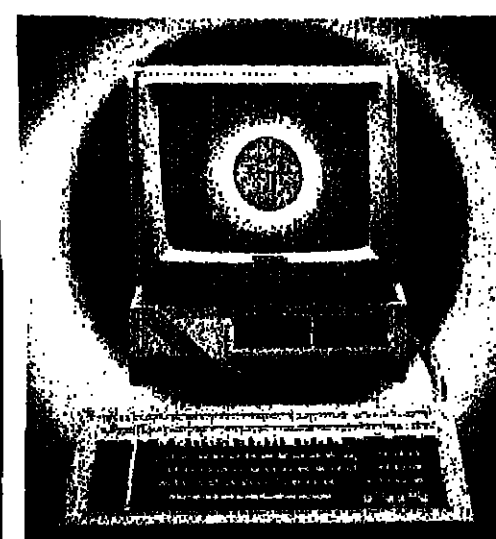
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Criticism sparks discord

by David Jobbins

A power struggle redolent of a Verdi opera is being played out against the unlikely backdrop of the Welsh College of Music and Drama.

The cast includes a new principal bent on dragging the college into the post-National Advisory Body era, performers and teachers of music and drama angered at the way the college is being run, and local leaders of their trade union who are calling for his suspension.

It has been prompted by the disclosure of a confidential memorandum from the principal, Mr Peter Fletcher, to officials of the South Glamorgan County Council in which he was highly critical of the calibre of both staff and students.

A wide-ranging inquiry into the running of the college is due to report shortly to an extraordinary meeting of the governing body.

But behind the scenes there are union moves to force Mr Fletcher's suspension from his job because of the way he has treated staff. Among the alleged victims is a harpist whose teaching hours have been cut and handed over to one of her former students.

Another complaint involves a tutor whose timetable was arranged so that she was unable to teach a longstanding student who had to opt for private tuition to maintain the contact.

In all, members of the National Association of Teachers in Further and Higher Education lodged half-a-dozen individual grievances about their treatment by Mr Fletcher before a collective dispute was declared before Christmas.

Membership of the union has increased from eight to 38 - almost the entire staff - and the college branch is to hold an emergency branch meeting in the next few days to decide its response to Mr Fletcher's memorandum. The South Glamorgan liaison committee has already called for his suspension but the demand has been turned down by the education authority pending the outcome of the inquiry.

Mr Fletcher's memorandum said that lack of managerial supervision and the national conditions of service agreement meant that teaching hours had been "engineered to keep an over-large and generally mediocre 'academic staff in business', with many posts regarded as sinecures."

It claims progress against union opposition but points to staffing as an acute problem. "You cannot build a national conservatoire with a predominantly mediocre staff," he says. Ten of the 22 full time staff in the music department are "more of a liability than an asset".

As an alternative to compulsory redundancy, he suggests an "exceptionally generous" early retirement scheme available for one year only.

First, an apology. I write this (because the editor wants his copy) as Michael Heseltine gives his press conference explaining why he walked out of the Cabinet and resigned in a manner without parallel since George Brown's celebrated departure from Harold Wilson's Cabinet in 1968.

Parliament is in recess. This morning as I ambled through the Library to the Silence Room where I am attempting to draft my version of Labour's future policy for local government, there was just one other member in the place - and he was asleep in one of the cavernous armchairs so thoughtfully provided by the Victorian designers of this wonderful palace.

But, as the news of Michael Heseltine's resignation came through suddenly and everywhere Conservative members appeared around the photocopier in the reference room, around the tape machine in the corridor outside the smoking room. They were never alone but in clusters of two or three or four, discussing one subject only - why had Michael done it?

For some of them - those who newly came cocky in 1979, or cockatoo in 1983, the realization was dawning that, in Robert

Karen Gold reports from the conference of the Association of Learned Societies in the Social Sciences

Protection cost 'too high' for NAB

Why should the National Advisory Body protect social science, threatened with a 30 per cent cut in polytechnics and colleges in 1987? asked Mr Christopher Ball, chairman of NAB's board at the ALSSS conference on social science in higher education.

Protection for the social sciences would be at the expense of other subjects - some of which, such as science, technology and professional education, NAB had agreed to protect, he said.

"And yet your subjects," he told the conference, "are concerned with the greatest issues of our times - which need, in my view, not greater technology but more understanding of society, more effective creation and distribution of wealth, and wiser government."

"We need the social sciences as never before. And if that's an inflated claim, I make it," he added, referring to criticism from Sir Peter Swinnerton-Dyer, University Grants Committee chairman, that exaggerated claims by social scientists for their work had contributed to their low public esteem.

"I am unhappy, indeed I am ashamed of the task that lies before NAB," he said. Both he and Sir Peter were failures, he said. They had failed to persuade the government to make realistic calculations of student demand, to realize that demand could be

managed, that the student awards system could be used to manage it, and that the predicted drop in graduates and diplomats would affect employers.

They had failed to persuade the government to allow the pattern of student demand for subjects to outweigh employment need, to provide effective joint planning across higher education, and most of all to provide sufficient resources.

Student demand for subjects should take priority over employment need, he said, but employment need for overall numbers should take priority over student demand.

He agreed that more research, needed on the long-term career of social science students rather than their first destinations on graduation, "Of course research is needed."

Why haven't you done it?" he asked. "Why don't you know about subjects, the case that could be made in employment for why the social studies make an excellent base for what society needs?"

In the current NAB exercise planning for 1987/88 decisions on what would be made by April, he said. "Unless the universities took a students, 18,000 would be with places in 1987."

Leader, back

more than a contributor to the economy but as contributing to personal development and cultural life as well.

But those arguing for preserving social science courses in the public sector had to realize that would be the expense of other courses. Professional bodies had to convince NAB that their training courses were not preserving - and they could no longer get away with simply saying the courses needed to be longer to be improved.

Dr Clive Booth, director of Oxford Polytechnic, said he had been quite surprised at the ineffectiveness of social scientists in fighting off the selective cuts being hatched for them.

He suggested areas where the government could be attacked: its Green Paper on the future of higher education was full of unjustified assertions, he said. "Resources are being put in empty places in science and technology."

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book that I can wave at Peter (Sir Peter Swinnerton-Dyer) and his colleagues on the Advisory Board for the Research Councils and say, 'This is a tremendous piece of work'.

"I have a few, but some of them have been around for three years, and I need some more. We do have problems. I certainly have problems. The only people who can help me are you."

The ESRC in its scrutiny of PhDs and student completion rates of PhDs was concerned with training researchers of high quality who were businesslike and reasonably expeditious in what they did, he said. The council wanted innovators rather than plodders.

The council was looking at how many PhDs in the social sciences the country ought to be producing, and if PhDs were necessarily the best way of training effective researchers.

Parliament has extended the duties of social workers during their training, which means that training was needed.

"Discussion of recent child abuse tragedies had highlighted the training needs of social workers and revealed public anger that it is still legally possible for unqualified workers to handle such cases," he said.

The bodies with statutory responsibilities have all accepted the need for a strengthened training programme for social workers and support the Central Council for Education and Training in Social Work's policy in favour of a three-year qualification.

The four professional associations have already put their weight firmly behind a strong network of university and polytechnic courses in a letter to the *THE*, a copy of which has also been sent to Sir Keith.

Mr David Jones, the association's general secretary, put forward the arguments in a letter to Sir Keith Joseph. He pointed to the increased demand for social service skills and stressed the need for more personnel.

An emergency resolution passed by BASW's national council criticized the 20 per cent cut in social work training proposed by the National Advisory Body. This runs counter to public calls arising from recent child abuse cases for better and longer training it says.

It calls upon the Education Secretary, the NAB and the UGC to recognize the short and long term effects of cuts on this scale and to reverse the current trend.

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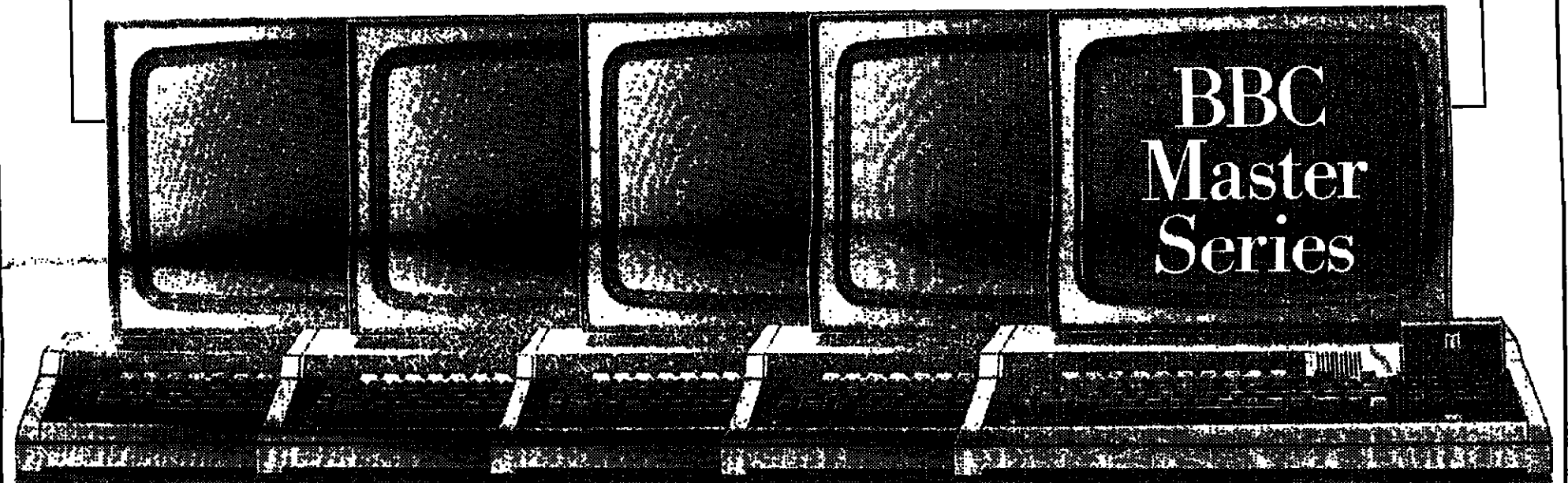
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ANTI-THESIS

Win some, lose some

Michael Heseltine's resignation has sent shock waves through Scottish higher education, not least at Craigie College. The college suspects its escape from the last round of closures was not unrelated to its presence in the constituency of Mr George Younger, then Secretary of State for Scotland, now to be Mr Heseltine's replacement at defence.

But there are always winners and losers. Hence joyful cries from Napier College, now in the constituency of the new Scottish secretary Mr Malcolm Rifkind. Mrs Rifkind used to be on the staff of Napier, where rumours are circulating that there is now at least a chance it will be the new University of Scotland.

A week is almost as long in higher education as in politics. Or so it must seem to Dr Clive Booth, eight days director of Oxford Polytechnic. "I share with Mr Michael Heseltine the fact that we both left Government service yesterday," the former member of HM Inspectorate told a conference last week. "And I hope to be just as loyal to the Government as he has been."

Redirected

A posher and a gamekeeper have been lured to job-swaps at the Polytechnic of North London. The new two-year assistant director posts are going to Roger Johnson - long-term cuddly left member of Natfhe's national executive and no sympathizer with the union's harder-faced members at his present South Bank Polytechnic or at the PNL - and Dorena Urwin, currently National Advisory Body principal assistant who will doubtless cast an eye over the PNL's previous less than successful NAB returns.

The departure of "Jankel" from South Bank will leave the polytechnic still more bereft of senior staff. This month it lost its director (gone to PNL), its deputy director (gone to Bristol Polytechnic) and, at the end of January, its pro-vice-chancellor Chris Price (going to Leeds Polytechnic). An innocent bystander at a South Bank event was recently warned by a disgruntled member of staff: "Don't stand still too long, or they'll make you an assistant director."

Entrepreneurial hang-up

Conflict has broken out between entrepreneurial dons and cost-cutting administrators at Southampton University. The reason: the need to reduce over-increasing phone bills. A plan to bar all phones from making O-prefix calls between 9am and 1pm encountered bitter opposition from business-minded academics who claimed that all deals were sewn up in precisely those clear-thinking hours; no use, apparently, in waiting for the post-expense account lunch haze to set in before clinching that extra £10K worth of income.

The engineers even wrote to the vice-chancellor saying they'd rather pay their own bills than be so drastically discontented. Finally, the cost-cutters had to give way - all cost centres in the university have now been left to find their own economic. Academic freedom one, Jarrett nil.

Attack on 'selfish' scientists

by Peter Aspiden

The campaign to "Save British Science" is an example of the subject's monumental degree of selfishness. Sir Geoffrey Eton, Regius professor of modern history at Cambridge University, told a Historical Association conference in London.

He attacked scientists for over-emphasizing their own immediate concern in the fight against Government funding cuts, and said that their selfishness was precisely why subjects such as history were important. "It is the only subject which makes you grow up and takes you past adolescence," he said. Sir Geoffrey was addressing a meeting of historians at the House of Lords which was primarily concerned with devising its own campaign to prevent the subject from disappearing from school curricula and many institutions of higher education.

He sounded a pessimistic note when he said: "The English nation is not really interested in history and we

should stop pretending that it is - it is interested in pagantry, which is a completely different thing."

In his keynote speech, Professor John Roberts, warden of Merton College, Oxford, conceded that teachers and lecturers were partly to blame for the lack of respect shown for history. "We have given an impression of remoteness, and some of us have been unwilling to present history to as wide a public as possible, although it is more accessible to the layman than any other subject," he said.

A society which gave a low priority to the teaching of history was one which was "suffused with bad history, where the past was perceived as remote and irrelevant," he said. "With no sense of history, there is no sense of what is relevant and enduring, and there is less chance of understanding why other people think and behave differently from ourselves."

Professor Roberts said history had a vital role to play in the moral education

of the nation, which enabled people to understand and accept human differences, and should be provocative.

The meeting also discussed historians' forthcoming response to the Green Paper, which was condemned for its purely rhetorical commitment to the humanities.

Professor Michael Biddiss, of Reading University, said the response would point out the dangers of cutting funds to universities while at the same time shifting resources from the arts to science and technology.

He said the positive rhetoric contained in the Green Paper was not matched by any funding commitments, and the recent Government proposals on tenure would encourage further immobility of history staff.

The conference chairman, Lord Bullock, said historians needed to provide evidence of the subject's usefulness in the face of growing scepticism about the cashable value of a liberal arts education.

Boost for industry exchange

by Carolyn Dempster

A £45,000 brokerage scheme to secondment of further and higher education lecturers to industry has been launched within the next two months by the British Association for Commercial and Industrial Education.

The scheme will be run as a project for the first 18 months under the umbrella of PICKUP, the programme of professional, industrial, and commercial updating courses sponsored by the Department of Education and Science.

The rationale behind the initiative called the PICKUP/BACIE Industrial Secondments Service, is to facilitate industrial placements for lecturers creating a systematic and co-ordinated mechanism which provides a point of contact for businesses and interest lecturers.

"Teacher exchanges in industry now a well established feature of education industry interface, and organizations such as Understanding British Industry and British Petroleum have made a considerable contribution," said Mr Steve Sharples, information services manager for BACIE.

"Curiously however, the same cannot be said of further and higher education, where industrial placements for lecturers are relatively uncommon."

Reasons for this range from difficulties experienced by lecturers in arranging placements to the lack of a central forum which might serve to encourage collaboration. The lack of exchange personnel has also served to perpetuate the stereotypical view education has of industry and vice versa.

"Much of the criticism of education has been justified," said BACIE director Mr Basil Murphy. "The educational world to the outsider has seemed closed, complacent and rather arrogant society, notably resistant to change."

concerned about the multigenerational plant and machinery the development of its people and "don't know what they want from education anyway."

BACIE hopes the benefits derived from the industry/education links generated through the service will extend their knowledge and skills and to build up new contacts. Institutions will have the opportunity to explain what they can offer to industry as well as using the secondments to revitalize staff development schemes, and organizations will benefit by gaining access to expertise in addition to learning more about education.

The scheme is being structured in three stages. The first six-month pilot will focus on a marketing and promotion campaign to put the secondment on the map. After that, the broker unit will develop and publish guidelines and back-up material for department heads and firms to ensure both sides make the most of a secondment. Third, a four-month evaluation of the scheme, secondment institutions and host companies planned.

St David's University College, Lampeter, is to launch a pilot programme for small and medium sized Welsh businesses. The Welsh Office Grant is to fund the university institution in Wales, and enable St David's to tailor its programmes to the needs of its market.



Equal rights for those left behind

It has not been widely reported outside the university world that an unusual and possibly remarkable exercise is currently under way. The huge Universities Superannuation Scheme pension fund is conducting an advisory poll of its contributors to ascertain their willingness to bring in automatic pensions for the widowers of deceased members. This follows strong pressure from the Association of University Teachers and a favourable vote in an AUT ballot some two years ago.

The catch is that the new benefit sought will have to be paid for by the members and, despite strong AUT advice to vote in favour of change, the outcome of the vote, and still more the final decision by the USS Trustee Company, must remain in doubt.

The USS is a very good pension scheme. Like many others, it provides benefits by way of pension, not only for members but for widows and their children. If there is no widow at the time of a member's death, other adult dependants may also be paid a pension. Presently, widowers can qualify for pensions but only if they are also dependent. When the scheme was being constructed, in 1974, attempts were made to incorporate equal rights for widows and widowers, but that time, Inland Revenue restrictions prevented this. This prohibition was lifted just before the scheme was formally launched but the Government would not permit the amendment at that time.

The EEC, and to a very limited extent, even our own Government pay lip service to equality between the sexes. Discrimination is still permitted in retirement benefits schemes despite parallel anti-discrimination provisions in other parts of current labour law. After much heart-searching, the AUT agreed that there was no way in which universities could be persuaded to pay the cost of bringing in this particular equalization. Consequently the cost, amounting to 0.25 per cent of salary, will have to be met by an increase in employee contributions.

This is probably less than the cost to a comparable scheme which had many more women members. It does, however, seem a lot compared with recent actuarial estimates made public in a more general campaign backed by the equal opportunities lobby. This is because the USS proposal would have immediate effect for current contributors to the scheme and would relate to past service. The cost of widows' pensions is already met by the main USS scheme and is not recorded as a separate item. All contribute, whether married or not.

Unfortunately, correcting this particular discrimination exposes more obviously the discrimination against the unmarried, especially those without other dependants who will be asked to shoulder a further financial burden without any expectation of personal reward.

When the ballot closes at the end of January, it will be of great interest to see whether members by their vote will seek to draw the line at the present unequal state or whether there will be encouragement to further moves towards guaranteed benefits for any nominated beneficiary, as some unions already advocate.

Perhaps, on the other hand, there will be support instead for the logical and non-discriminatory payment of survivors' benefits only to dependants, irrespective of sex.

Geoffrey Talbot

The author is assistant general secretary of the Association of University Teachers.

Closure plans condemned

by Olga Wojtas
Scottish Correspondent

One of the likely victims of proposals to axe three of Scotland's seven colleges of education this week mounted its counter-attack, condemning the plan as bewildering and illogical.

Dunfermline College of Physical Education, considered to be among those at risk if the Government supports the Scottish Tertiary Education Advisory Council proposals, has sent confidential briefing notes to all Scottish MPs in advance of the Scottish Grand Committee debate on the STEAC report in Edinburgh on Monday.

The council has warned the Scottish Education Department to reduce the number of education colleges as soon as possible, and has criticized present surplus accommodation.

But Dunfermline says the STEAC report follows earlier criticisms by the Auditor and Comptroller General that there are no reliable figures for college

capacity, with the SED now undertaking a survey on this.

"It is impossible to understand how decisions can be made about the future of the college of education sector, or indeed the future of particular institutions, without accurate and up-to-date figures on colleges' student capacity," says the Dunfermline paper.

It also attacks STEAC's suggestion that only four colleges are needed, pointing out that the present seven institutions range from 2,500 students to 500.

Dunfermline claims that STEAC's projections of "something over 5,000" pre-service students in the education colleges in the next decade is unreliable, and could be an underestimate by more than 2,000, given projections in the Comptroller and Auditor General's report.

The college adds that while it would be inappropriate to challenge STEAC's conclusions about increasing demand for higher education, it is dangerous to place too great a reliance

on forecasts. It points out that in 1977, the SED forecast the total college of education population in 1987/88 at 11,400, whereas the most recent estimate is 9,300.

Dunfermline has the second highest unit cost for students in the education college sector, £3,969, according to the STEAC report. But Dunfermline stresses that the report itself warns that such figures "should be interpreted with great care".

Specialist training inevitably leads to higher unit costs, it adds, pointing out that as well as offering a BEd in physical education, it runs both BA and diploma courses in recreation and leisure, a diploma in sports coaching, and certificates in outdoor pursuits.

Dunfermline praises STEAC's view that higher education contributes to Scotland's economic prosperity, but says it is "surprising and regrettable" that while it gives particular priority to science and technology, it overlooks the importance of leisure, recreation and tourism.

Salford seeks IT recruits

by Jon Turney
Science Correspondent

Salford University is launching a recruitment campaign for students with science A levels for its new Information Technology Institute, to be opened this October.

Plans for the IT centre, developed jointly by the university, the National Computing Centre and industry, were activated when Salford was allocated £1.4 million from the second round of awards under the Government's scheme to boost engineering and technology in higher education.

This award will go along with university funds to pay for a new IT building and core staff. Companies already pledged to help with the rest of the staff needed or donate equipment

include British Gas, British Nuclear Fuel, CAP, Digital, Ferranti, GEC, IBM, ICI and Unipart.

The institute's director will be Mr John Larmouth, now director of a computer research unit at Salford. He believes students do not need maths or physics to succeed in information technology, although prospective entrants will have to take an aptitude test in logical analysis. The university hopes to attract a high proportion of women students, and to help students with foreign language A levels to take up technical language work.

The first year's intake of 55 students will be able to choose between specialized streams in business systems or software technology. Both streams will include work experience outside the university.

More jobs for poly graduates

by Karen Gold

Employment is up for polytechnic graduates, according to the latest figures from the Committee of Directors of Polytechnics. But there are wide disparities between graduates in different subjects.

Of polytechnic 1984 graduates, 55.6 per cent went into permanent jobs in the United Kingdom, compared with 51.1 per cent of 1983 graduates, the CDP says. That rise masks a large number of additional jobs gained, since the number of poly graduates in 1984 was 11.8 per cent higher than in 1983.

The percentage of 1984 graduates who were unemployed at the end of the year - 13.6 per cent - was also lower than in 1983, when it was 14.8 per cent. A slightly higher proportion of male graduates were in full-time permanent jobs - 57 per cent - compared with women - 54 per cent. But fractionally fewer women were unemployed - 13.3 per cent compared with 13.7 per cent of men.

The proportions vary hugely between subjects, however. Graduates in building, management and science almost all go into full-time permanent employment (85 per cent).

But almost 27 per cent of 1984 art graduates were unemployed at the end of the year, and 25 per cent of graduates in arts and humanities subjects.

In sociology and other social studies, 22 per cent of students were also unemployed at that stage. Eighteen per cent of languages students were unemployed.

First destinations of polytechnic students qualifying in 1984, published by CDP at £6.50, available from CDP, 309 Regent Street, London W1R 9PE.

Plea for tax relief wins DES support

Ministers are softening their attitude towards tax concessions for salaried staff who undertake continuing education.

Sir Keith Joseph, Secretary of State for Education and Science, is said to have been impressed by the evidence put forward by the Manpower Services Commission and the National Economic Development Council in their joint report "Competence and Competition" which highlighted the poor record of Britain compared to West Germany, Japan and the United States.

The Department of Education and Science has approached an outside agency concerned with continuing professional development to carry out a survey of policies and practice in other countries over tax concessions. The department has some evidence from abroad about tax, loan and grant arrangements for employers and employed and about protection against poaching between companies following updating training, but it is patchy.

The new investigation, to be completed by April, will be carried out by the Planning Exchange in Glasgow which has experience of similar surveys within the European Community, and Mr Neil Piercy, a researcher in London. It follows an application from the Continuing Professional Development in Construction Group which represents eight professional bodies.

The group which was formed to spearhead the campaign for greater financial support for continuing education for the professions has won a DES grant under the professional, industrial and commercial updating programme to carry out the investigation.

"We believe that it is unfair for salaried staff whose employer either cannot or will not pay for professional updating, time off from work and payment of fees to be unable to set those costs off against tax as employers can set against profits," said a representative of the group.

Approaches made to the Treasury and Inland Revenue have so far failed. But the new survey is a sign that the DES is gathering evidence to put a more persuasive case next year.



Sitting sculptor: Leicester Polytechnic lecturer Lee Orton with some of his work in the fine art school's exhibition of staff work which is running to the end of this month in a city exhibition hall

Union furious over locked classrooms

Lecturers at North East London Polytechnic are furious at the way locks have been installed on all classroom doors at the main Barking precinct.

The locks appeared at the beginning of the new term without prior consultation with the staff with the agreement of the polytechnic's rectorate "in the interest of security and to avoid vandalism".

But local leaders of the National Association of Teachers in Further and

Higher Education say that in their experience there has been nothing on a scale to justify such a response.

"Many staff have commented on the implications of this move for the atmosphere of what purports to be an academic institution, and for representing expectations of our students from which we would wish to dissociate ourselves," Natfhe branch chairman Peter Mattingley said.

Natfhe believes that the effect of the locks will be disruptive and time-

wasting, and is worried that no one has been taken of implications for health and safety.

It is particularly concerned at the possibility of access to rooms being delayed in an emergency, slowing down evacuation, and students waiting for classes blocking corridors.

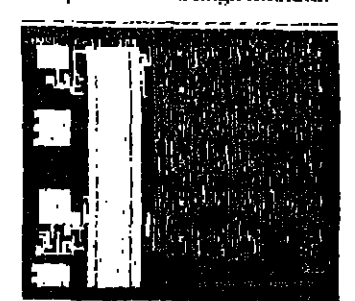
The polytechnic said the locks were needed to safeguard new classroom equipment including video recording and had been called for by a staff-student working party.

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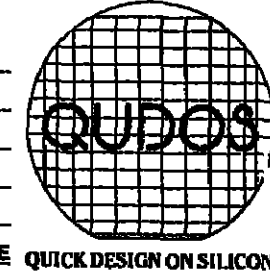
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overseas news

Germans support joint approach on CERN

from David Dickson

PARIS West Germany seems likely to support Britain's proposal that an international committee be set up to look at the future operation of the European Organization for Nuclear Research (CERN) in Geneva.

An official with the federal ministry for research and technology said in Bonn last week that there had been a "positive response" to the proposal to set up such a committee when it was put forward by the under-secretary of state for higher education and science, Mr George Walden, during a visit to the German capital at the beginning of December.

In contrast, the French government says that it feels that if such a committee were established, it should be on the initiative of CERN's governing council - on which all 14 of the organization's member countries are already represented at government level rather than a few individual countries.

Mr Walden's proposal has been put forward as a way of avoiding the

political backwash within Europe's scientific community that could result from Britain deciding to push through unilaterally with the recommendation of last year's review committee, chaired by Sir John Kendrew, that it should reduce its CERN contribution by 25 per cent from 1991.

The implication of this recommendation was that other countries should consider following the same path, since contributions are assessed according to a fixed formula. The Kendrew committee claimed that the resulting decrease in CERN's budget represented an "attainable adjustment", even if it meant reducing the pace of future developments after the completion of the first phase of the large electron-positron (LEP) collider in 1989. However, so far no other government has given its public support for this proposal, partly because of the critical reaction it has already received from large sectors of the physics community.

West Germany's response to the suggestion of a new joint committee to examine the question of CERN's fu-



George Walden: positive response

ture, which has been confirmed by British officials, is particularly significant in view of the fact that it is the largest single contributor to the organization's budget. Bonn currently provides 25 per cent - the maximum for any member - of CERN's annual cost of about £240 million, compared to Britain's annual contribution of £38 million last year, 17 per cent of the total.

A close look at the opportunities for reducing the size of its overall commitment to high energy physics, currently the highest of any western nation when measured as a percentage of the gross national product, would come at a time when the German government is already reassessing the overall distribution of its research budget.

In particular, officials point out that there is currently strong political pressure to increase spending on a variety of new space projects - such as the French space mini-shuttle Hermes and the European contribution to the US space station - at the same time as the finance ministry is maintaining its fierce opposition to any overall increase in public spending on research and development.

The officials say that Germany would probably be favourable to a joint independent review of CERN providing that it looked not merely at the possibilities for cutting the cost of the laboratory, the main concern of Britain at the present time, but also in a more positive sense at the possibilities for future developments. They add

that they feel it would be important, a number of high energy physicists, members of a joint review committee, although these should not necessarily be in the majority.

The French minister for research and technology, M Hubert Curie, said in an interview last week that France was less enthusiastic than Germany about Mr Walden's proposal, which the two ministers had discussed in Paris. France is the second largest contributor to CERN's budget, providing 21 per cent of the total. Mr Curie pointed out that CERN itself has already set up its own independent committee, chaired by the Ne Laureate Carlo Rubbia, to look at long-term options.

However, France's lukewarm attitude towards the setting up of a committee which could eventually recommend a reduction in CERN budget is felt by some British officials to be understandable in view of the imminent elections in which the current government is seeking to emphasize its commitment to European cooperation in all fields of research.

Women's victory costs \$1 million

from William Norris

WASHINGTON

After eight years of litigation, the University of Rhode Island has at last reached a settlement in its dispute with 400 present and former female members of faculty.

The women, who had accused the university of sex discrimination, have agreed to drop the case in return for payment totalling \$1.24 million.

The real winners, however, are the lawyers. The university is estimated to have spent over \$1 million on legal fees since the action began in 1977, and almost half the women's settlement is to be set aside to defray some of their litigation costs. The balance will presumably have to be met from their share of the remaining \$623,250 - which works out at an average of \$2,000 apiece. There is unlikely to be much change.

"It's a wonderful thing to have this settled," said J. Morton Briggs, president of the campus chapter of the American Association of University Professors. "It's absurd to have fought for so long."

Last April a federal judge issued a 299-page opinion, concluding that the

university had discriminated against some of the women on the basis of sex when it assigned them their original ranks and starting salaries. He criticized Rhode Island for an attitude of "studied indifference" and for a decade of "high level foot-dragging" over affirmative action.

In June, the same judge issued an injunction, ordering the university to have the approval of its affirmative action officer and the campus chapter of the AAUP before offering a faculty position to any candidate, male or female.

Douglas M. Rosie, assistant vice president for academic affairs at Rhode Island, commented stiffly that the settlement did not represent an admission of liability on the part of the university. "People just sat down and figured out what the cost to the university would be to continue the litigation," he said. "The point of no return had been reached."

The settlement still has to be approved at a court hearing next month. If it goes through, those women who qualify for awards will get their money within a year. Provided, that is, that there is anything left after the lawyers have taken their fees.

Haiti radio station reopens

by Patricia Smith

The Haitian Catholic Radio Soleil which was closed down at the beginning of December for reporting the deaths of four students is now back on the air.

The students had been taking part in a protest in the town of Gonaives, 152 km north-west of Port-au-Prince, on November 28, when they were shot by police. Fourteen other participants in

the demonstration, which was against poor living conditions and negligible employment prospects, were wounded.

According to official Haitian sources, Radio Soleil was ordered to close temporarily, since it was broadcasting news which would "excite and alarm the people". In fact, it does not appear to have reported the demonstrations as such, but only condemned the "murder" of students in Gonaives.

Historians press for lifting of censorship

The withdrawal from publication of wartime memoirs, and the reaction of some politicians to the appearance of diaries kept by a postwar president, have highlighted the problem of freedom of expression in Finland, and its bearing on academic research.

The censored book is the second volume of memoirs by Mr Hans Metzger, the Nazi Germany press attaché in Helsinki during World War II. The first volume, published in 1984, is an unrepentant and rather bombastic account of the period until June 1941 - including the 1939-40 winter war when Finland, assigned to the Soviet sphere by the Ribbentrop-Molotov non-aggression pact, gallantly resisted the Red Army.

The second volume - *Political Co-Belligerence*, stretching until 1944, begins with Finland siding with Hitler in his attack on Russia. To a large extent the Finns were victims of circumstance

but some of them harboured hopes not only of revenge but of expanding their territory eastward. Urho Kekkonen, president from 1956 to 1982, did much to destroy the myth that Finland simply drifted into war.

Now 85, Kekkonen is no longer aware of the world around him. But his surviving twin son Matti has taken steps to stop Otava, the country's second largest book publisher, from issuing *Political Co-Belligerence*, from its issuing. The real reason for his action may be that the relevant passages chosen by Metzger cover the early period of the 1941-44 war when Urho Kekkonen, in the words of a

political opponent, was a "penetrating war propagandist". It was in autumn 1943 that Kekkonen, then a government minister, first aired his own views on extrajudicial Finland from the war. Superficially it was a volte-face, though, as one of his biographers has written, there were two Kekkonens - the anonymous columnist who predicted a successful outcome to the fighting, and the statesman who believed the battle against the USSR was lost.

For historians the implications of the publishing ban are grave. Not only could Metzger, in his peculiar way, be a useful source for future scholars but there is unease that Otava did not fight the copyright issue in the courts. As things are, researchers have been hampered by a 1984 government decision extending the secrecy of foreign policy documents from 40 to 50 years on the grounds that officials should be able to

control the publication of such papers, and that relations with foreign powers should not be jeopardized.

The authorities' claim that exceptions could be made in the case of trusted researchers looks unconvincing. One eminent Finnish historian has had to visit Britain to obtain information because he was denied access to the Finnish state archive.

The core of the problem, once again, is freedom of expression in a small democracy bordering the world's mightiest totalitarian state and the way in which politicians and civil servants decide when publication could prejudice the "national interest".

The practice of self-censorship reached its height - or nadir - during the presidency of Kekkonen, who exerted subtle pressure on the media to prevent publication of diaries kept by his predecessor, Juho Kusti Paasikivi (president from 1946 to 1956).

New video disc records are a hit with archivists

A solution to the problem of fading microfilm, and the boredom of searching through it reel by reel, has been found at the Smithsonian Institution in Washington DC.

Scientists at the Smithsonian's National Air and Space Museum have perfected a method of storing accurate reproductions of fragile archival material on videotapes, and archivists world-wide are showing a keen interest. There have already been enquiries from the British Museum and the Vatican.

Work on the project, known as the System for Digital Display, began in 1983 when the director of the Museum, Walter J. Boyne, began looking for a more effective storage medium than microfilm for his collection of artefacts, documents and research papers. These include the Wright Brothers' drawings and personal papers.

A computer program for transferring the million or so photographs in the museum's library on to videotapes had already been developed, but a different process was needed for documents, drawings, and three-dimensional artefacts. It also had to use inexpensive "off the shelf" equipment and software.

The job was given to the Advanced Projects Division at the Air and Space Museum, headed by Herman Olano. They came up with a process called "digital scanning", in which a special digitizing camera is focused on a page and translates the black, white and grey of the printing into a series of on-off signals which the computer can read. The page is stored on a "bit-map" format - a mosaic pattern analogous to the tiny dots which make up a television picture.

Computer software then takes over and transforms this raw pictorial data into a fully-indexed archive. First, the text is translated from a random set of shapes into the letters of the alphabet,

through a process called "optical character recognition". The software can recognize virtually any type style, and can probably be developed to handle handwritten text.

Thousands of pages can be stored on a single videotape. The team have estimated that it would take a typist working at 90 words a minute for an eight hour day to type a single side. And within three years the team are predicting that the capacity of discs will be increased by a factor of 40.

Indexing is done with remarkable speed. "We started running a 700-page book through it, went out to lunch, and the book was fully indexed by the time we got back," says Olano.

To reach the videotape, an inexpensive player is hooked up to a personal computer. The required page can be found in a matter of seconds, and an exact copy printed. It is also possible to enlarge the image for greater detail.

Because documents stored by the new system only have to be handled once, wear and tear is drastically reduced. A number of museums and libraries have already offered to lend their public and private collections to the Air and Space Museum for storage on videotape. Library technicians are now capturing more than 1,000 pages a day.

The system is completely portable, and is currently being used at the Alabama Space and Rocket Center in Huntsville, where the papers of Werner von Braun are housed. These and many other historic documents will now become more readily available to researchers, for the sturdy videotapes can easily be copied and sent anywhere by post.

Other predicted uses include the detection of forgeries through the capacity to enhance the image, and the creation of a high-resolution colour inventory of works of art.

Nordic blueprint welcomed

from Donald Fields

HELSINKI

Nordic universities and researchers will have more than a passing interest in a blueprint that could pave the way for more cooperation within their region, and stronger links with western Europe.

The six-point document has been produced by a group of 10 industrialists, bankers and trade unionists from Denmark, Finland, Norway, Sweden and the Netherlands.

The Volvo Corporation, president of the group, is calling for funds for industrial development risk capital for small firms, an all-Nordic centre for information technology, better road and rail links with more continental countries, a Nordic culture festival and new jobs for the young. The Gjyllenhammar plan is not concerned with higher education as such. However, it will, implemented, act as a catalyst for research and scholarship throughout the region.

Unveiling his group's findings in Helsinki, Mr Gjyllenhammar touched on the special problems of Nordic universities: "They do not have the resources to compete in this world. Therefore they must specialize".

Already an encouraging number of companies and trade unions in the Nordic countries have pledged donations to the Gjyllenhammar plan. Nordic prime ministers - three of them Conservative, two Social Democrats - and large welcomed the blueprint at a meeting in the Finnish capital.

The prime ministers stressed the countries' commitment to the European advanced technology initiative because it could promote the interests of small and medium-sized firms - and object was non-military.

In Copenhagen several weeks ago, the Nordic countries' scientific community organized by the Nordic council of ministers had endorsed the new blueprint. Bertel Haarder, the Nordic council's scientific research on its own.

The combined population of the Nordic countries is only half that of England and great distances impede cross-fertilization of ideas.

The rector of Uppsala University in Sweden, Professor Martin Holmström, has urged that "true internationalism" should mark scholarship in the region. He believes a boost should be given to fields such as microbiology, in which the Nordic countries are strong, and researchers would be drawn together from the Nordic region and the rest of the world.

To eradicate wasteful duplication the Nordic countries are trying to share the costs of more research projects and equipment.

Row over civil rights 'failure'

from William Norris

WASHINGTON

The United States education department is under heavy fire for failing to enforce civil rights laws forbidding discrimination against blacks, women and the handicapped, in universities and schools.

An investigation by a congressional subcommittee concludes that the department's Office for Civil Rights has, under the Reagan administration, "failed to obtain complete enforcement remedies in cases where serious violations of the law were found".

Of 2,000 civil rights violations in colleges and school districts since President Reagan came to office, the committee found that administrative action had been taken on a mere 26, and only 24 had been referred to the justice department for enforcement. Of those, 16 had still not been reviewed after more than two years, five had been returned to the Office for Civil Rights, one was tied up by a pending lawsuit, and two had been resolved by consent.

This is in spite of the fact that the department was ordered by a federal court in 1983 to act within a strict timescale on civil rights complaints. It is supposed to complete investigations within 90 days, finish settlement negotiations in a further 90 days, and take enforcement action if necessary within the next 30 days.

The investigation, which lasted for a year, also revealed that the Office for Civil Rights had ignored the findings of its own quality assurance staff, and instead of acting on their recommendations had "abdicated the unit".

The head of the Office for Civil Rights, Harry M. Singleton, resigned on the day before the report was issued, though he denied the criticisms. The committee's criticisms are "a lot of nonsense". There has been no official comment from the education department.

Mr Singleton, himself a black, had a rough time during the committee hearings and was accused by the chairman, Representative Ted Weiss, of lying under oath. He retorted by charging Mr Weiss with "nitpicking the issue" and conducting a witch-hunt.

The new chief has yet to be appointed, but is likely to be Barbara Lerner, a psychologist, lawyer and consultant from Princeton.

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Pidgin English criticized in Ghana

Pidgin English on campus is causing considerable worry to Ghanaian educationalists, according to the *Accra newspaper, The Echo*. The trend, which began simply as a fashion among students is now becoming the lingua franca of youth, it claims.

Although cult languages occur in many parts of the world, there is no other case, *The Echo* said, where the future leaders of the country talk a "mixture in which all the tenses are thrown to the wind, and words are picked from far and wide, making no sense to the listener".

The Ministry of Education and the Ghanaian education service should take stern measures against the trend, the paper urges.

Greene refuses Warsaw

Poland's international congress of intellectuals for peace which opened yesterday seems liable to become a "major non-event" according to unofficial Warsaw sources.

Intended originally as a gathering of top scholars and literary figures of Nobel laureate stature, the congress has instead become distinguished by the large number of eminent persons who have declined their invitation.

Authors Graham Greene and Kurt

Call for Asian awareness

from Geoff Maslen

MELBOURNE

The Australian minister for education, Senator Susan Ryan, has called for greater efforts by education institutions to enable Australians to become proficient in Asian languages and to obtain a detailed knowledge of Asian culture, history and economics.

Senator Ryan told an inaugural conference of people interested in Asia at the Australian National University that they had a key role to play in improving community attitudes and perceptions so that the importance of Asian studies was realised.

Despite a long period of discriminatory immigration policies, education had been one of the important countervailing influences affecting Australia's relationship with its Asian neighbours, Senator Ryan told the conference.

The overseas student programme had been a most successful example of educational cooperation, helping to foster positive perceptions of Australia in many parts of Asia. Overseas students had been coming to Australia to study since 1904 and in that time an

estimated 250,000 young foreigners, mostly from Asia, had studied here.

"The presence of Asian students in Australian institutions at various levels has enriched the educational environment," Senator Ryan said. "Apart from bringing about a greater awareness of the cultures from which they come, overseas students have challenged some of the assumptions underlying Australian culture in a way that has stimulated intellectual growth".

Yet despite the growing awareness throughout the Australian community of the importance of Asia to Australia's future, and despite the fact that Australian students now have much better opportunities to study Asian languages and cultures, there has not been any corresponding increase in students including an Asian component in their educational aims.

At primary and secondary level, Indonesian, the most popular Asian language is studied by less than 1 per cent of students. This compares with between 4 and 8 per cent for the most popular European languages. Even in their final year take one of the main Asian languages and, similarly, while

most Australian universities and colleges of education offer one or more Asian languages, enrolments remain low.

In some cases there has been an actual decline in tertiary student numbers. Except for Japanese, relatively few students continue their tertiary studies beyond their first year of language study so they gain little usable knowledge.

Senator Ryan told the conference that the Australian government had recently set up a working party to investigate the feasibility of establishing an Asian Studies Council. She said there was a strong case for a body to act as a "broker" between the business community, the labour market, and governments on the one hand, and the education sector on the other.

Senator Ryan urged delegates involved in curriculum development to provide programmes which were relevant, interesting and attractive to potential students. She said that until students were convinced that their efforts to become proficient in Asian languages were marketable it was probable that student numbers in these subjects would remain marginal.

Whites now minority at Berkeley

from David Walker

BERKELEY

For the first time, white students are in the minority among those who started undergraduate degree courses at the University of California at Berkeley this term.

Students classified by the university as white Caucasians formed 47.9 per cent of first-year undergraduates. Whites still form the largest single ethnic group: with student classified as Asian the second largest with just under 27 per cent of the autumn enrolment. The Asian group includes students of Chinese origin and descent.

Hispanics, now the largest ethnic group in California after whites, formed over 10 per cent of Berkeley's enrolment with blacks making up just under 8 per cent.

Planners at the university expect that students classified as non-white could form a majority of undergraduates within a decade.

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Free bassing

The composer Gavin Bryars was recently made professor of music in Leicester Polytechnic, where he has taught since 1970. It is a still unusual appointment in the public sector, testimony both to Bryars' standing as teacher and musician, and to the growing respectability of New Music

One of the highpoints of the Arditi string quartet's recent – and relentless – season of premieres at London's Almeida Theatre was a new piece by Gavin Bryars. Much of the attention it received was directed somewhat ironically – at the revolutionary amplified Raad violin on which the piece was played. Ironically, because the quartet was itself noteworthy, clear sign of the change that has been wrought in Bryars' music over the past few years. To call it professorial would be unfair to its freshness, but magisterial it certainly was, and very beautiful.

Bryars came to New Music via jazz. In the 1960s, there was, for a time, almost no dividing line at all between exponents of free-form jazz, Cagney alcazarists, and performance artists. Jazz musicians were listening to John Cage, Erik Satie and Karlheinz Stockhausen; Cage himself gave the young Bryars work to do on *HPSCHD*, one of his most significant pieces.

That spell in Illinois was already a long way from hacking out jazz in northern clubs. Bryars was born in Gooles, Yorkshire in 1943. He went to Sheffield University to study philosophy, but quickly became involved in music as well, learning bass in order to form a jazz band, but with enough formal nous to join the university orchestra.

His interest in contemporary composition brought him into contact not only with Cage but with contemporary jazz musicians such as guitarist Derek Bailey and percussionist Tony Oxley, perhaps the most avant of the British jazz avant-garde. He also came into contact with young composers like the American Steve Reich and with the British radical Cornelius Cardew (who died so tragically in 1981). Through Cardew, he saw the work of the legendary Scratch Orchestra, a group that managed to break down barriers between serious, art music and popular forms.

That iconoclasm continued after Bryars went to Portsmouth in 1969 to teach at the College of Art. While there, he helped found another scratch orchestra, the equally legen-

dary – or notorious – Portsmouth Sinfonia, made up of amateur and scarcely versed players which put the music world back on its heels. Above all the Sinfonia was fun. It has been that element that has remained prominent in Bryars' work. Some of his best known "compositions" (since they are indeterminate, composition needs to be understood with a degree of leeway) were released on the Obscure label, a fact, along with the satirical black covers, which may have put off uncommitted purchasers. None the less *The Sinking of the Titanic*, remains one of the freshest sounding works of its time, the late 1960s.

His anti-highbrow sensibilities emerged also in pieces such as *A Game of Football for Large Spaces* (like most of the New Music composers in London, Bryars is a Queens Park Rangers fan, a little detail that might one day make an interesting sociological study) and *The Squirrel and the Ricketty-Ricketty Bridge*, which calls for two players each with two guitars. His interests, though by no means conventional, have become more purely musical over the years. His interest in performance and opera has been developing and he is contributing music to Robert Wilson's massive, multi-part *The Civil Wars*. He is now at work on an opera based on de Quincey's *Last Days of Immanuel Kant*.

He's also now head of his own department, autonomous from fine arts and with a new performing arts degree to administer. But there's no sense that the energetic sense of humour is gone. At the end of the Arditi's superb performance in December, a tall, balding figure unwinds from the front row, delivers four visibly crumpling handshakes on the podium and, grinning, waves with big, farmerish wrists at the audience. In the gallery, a woman turns to her neighbour: "That isn't him, surely?" Bryars doesn't look like the music he makes. But then he doesn't look like a professor either.

Brian Morton



Gavin Bryars: a long way from hacking out jazz in clubs



A master trainer in the classroom at Singal (above). Classes, snow permitting, are frequently held outside even in winter (right)

Teachers with their heads in the clouds

David Jobbins reports from northern Pakistan on the project bringing schools to this remote mountain region



Education is a tender plant in the rugged valleys high in the mountains where Pakistan, Afghanistan, China and the Soviet Union (almost) touch. A patchwork of once fiercely independent mountain kingdoms and the Marxist Russia – the Great Game with the Indian subcontinent as the prize – have left a legacy of instability and neglect.

Access to the Northern area is difficult because of their political and military sensitivity, while the Pakistan government lacks the resources to build the social infrastructure to bring an acceptable level of development to the far-flung villages of the world's most mountainous region.

Its efforts – in health provision as well as education – are thinly spread over an area where communications can be difficult and the environment exacting.

Valleys like the Hunza, where Pakistan borders on the Xinjiang province of China, were virtually autonomous states until they were merged into Pakistan in 1970.

At the upper end of the valley, with the Chinese border a few kilometres to the north and surrounded by snow-capped peaks soaring to 25,000 feet, the area's formal education began with the establishment of the first school less than 30 years ago.

Now there are five covering the six villages in what is known as the Churnashan valley – translated from the Persian as "Who asks about us?"

The first school was part of an initiative by the Aga Khan's late father, who established schools throughout Pakistan to mark his diamond jubilee. In many areas these schools gave girls their first taste of formal education outside the home at their spiritual leader's direct command.

In the remotest reaches of the Hunza however, it was an even more far-reaching revolution. Established in 1957 the first school catered for the children from all six villages, but now four primary and one middle school are attended by 440 children. Many of the schools were physically built by the villagers themselves, with locally recruited staff teaching in them.

One of the exceptions is the head-teacher at the village school in Reshit, the highest village in the valley about 13,000 feet above sea level.

Unlike most of the 12 teachers at the five schools in the area, Saib Hayat was trained in Karachi. One other teacher also attended college in Karachi, but of the remaining 10, all locally recruited, only two received

training at the college in Gilgit.

Many of the children at this school, the descendants of the fiercely independent Hunzas who eked out their meagre living by plundering the caravans crossing the mountains from China, display the blue eyes and fair hair and skin said to be inherited from Alexander the Great.

Before the arrival of the Aga Khan's diamond jubilee school, there was no formal education system in the region for contact with rapidly-developing culture.

But significant as the breakthrough was, there was concern at the dependence not only of DJ but state schools on unqualified teachers.

Throughout the Northern areas, half the 2,000 teachers in government schools have no teaching qualification; for the 117 schools managed by the Aga Khan central education board, 28 out of 396 teachers matriculated at the end of their school career, and of these only a quarter have a teaching qualification.

The imbalance between the government and DJ schools within the wider shortage of qualified teachers was acknowledged by the state, which set aside 15 places for DJ teachers at its training college in Gilgit, the administrative centre for the remote valleys. But the process of training all the teachers in the DJ schools would take at least 15 years, and was regarded by educationists as lacking in innovation and creativity. They wanted a radical shift away from the traditional authoritarian and inflexible teaching styles found in many schools both government and Aga Khan.

The problem is therefore not only the quantity but the quality of teachers. As with other professions, individuals are usually from privileged city backgrounds and are unwilling to move to the less developed areas.

So the idea of a radical new programme to enhance the effectiveness of the locally-recruited teachers was launched, with the Aga Khan education board and the state operating in close cooperation.

A two-pronged strategy was launched in 1983, funded through the Aga Khan Foundation and Canadian aid agencies. It comprises an in-service training programme but the most radical element is the development of a ramme taking place at the chalk face in

Four schools were chosen as the first centres and 10 trainees assigned to them. The key to the programme is the network of master trainers, teachers with a proven ability to perform well under local conditions.

Each of the first four centres, which became operational in May 1984, has two master trainers, who are expected to pass on their skills to the trainees, who may be either unqualified but practising teachers or raw recruits.

The trainees work in pairs, one taking the class while the other observes and assesses.

At the end of each day, the master trainers, who sit in on lessons, hold post-mortems in which the performance of the trainee is discussed and assessed.

Professor Mubarrak Hussain Shah, a Pakistan educationist who is acting as consultant to the project, says: "Too often teacher training takes place in a make-believe situation. Here we make them teach and explain it to them."

A second batch of four schools started up the field-based programme in May last year, chosen on the same basis as the first, with account taken of their central location, the religious balance between the different groups, and the possibility of a good percentage of female trainees.

A vital aid to the project is the development of manuals covering school subjects and five related to teaching practice – the psychology of education, child psychology and school administration.

The presence of girls in the schools has begun to lead to female staff – and one aim of the programme is to increase the proportion of female teachers. At Passu middle school-head-teacher Mohammed Karar has four women on his staff of six teaching 139 students, 66 boys and 73 girls; but women heads are rare.

High on the agenda is to achieve change in teaching methods, breaking down the traditional barriers between pupils and teacher, reducing if not eliminating the corporal punishment some visitors have found excessive, and replacing the system of learning by rote with true interaction.

The project's long term future less than two years after its inception remains uncertain. Its designers want to be sure their model is right before any decisions to implement it widely. So far results have been mixed. Organizers were disappointed with the high failure rate when the first batch of trainees took their primary teacher certificate examinations. But they are confident they are on the right track.

In the meantime hundreds of children from economically deprived backgrounds are enjoying the advantages of a brave experiment by a religious foundation backed by determined educational innovators.

David Walker talks to S. M. Lipset (below) on the political change of mood which has swept through American social sciences



Trotskyist of the New Right

example, into the study of social mobility, and into a series of comparative studies, especially the contrast between Canadian political culture (which has contained within it a socialist movement) and that of the United States. Explaining, as Trotsky tried, the triumph of oligarchy in the Soviet Union took Lipset to the writings of the German Robert Michels, and thence to his early and celebrated book about politics within printing unions, *Union Democracy* (co-written with Martin Trow and James Coleman).

Lipset has nothing to do nowadays with the sectarian Trotskyists who, he says, conveniently ignore Trotsky's own demonstration that Marxism (as a theory of working-class revolution) was "utopian". "It should be noted that Trotsky left specific advice to revolutionaries as to what they should do if Marxism turned out to be utopian," Lipset wrote in his most recent collection of essays, *Consensus and Conflict*. "His recommendation was the same as that proposed by Polish revolutionaries (Jan Mielnicki) and Robert Michels: support the masses against the oppressors."

In modern Poland that clearly means support for the strikes. And perhaps in the West, Lipset has hinted, the doctrine is useful as a guide to support for those social movements – the American student revolt was once one – that keep springing up in opposition to oligarchies and elites.

"In my judgement, it requires the maintenance and extension of all institutional practices, values and structural conditions that facilitate opposition by non-elites to those who dominate economically, politically and socially. Where all three forms of power are monopolized by a tiny elite as they are in authoritarian systems, one party or other, whether legitimated by non-leftist or rightist ideologies, the great mass will have little or no way of limiting the ability of those who control or dictate the way in which they shall live and work."

"Hence any movement or social change that undermines institutions facilitating opposition to the powerful or serves to enhance the potential for authoritarian rule, and for greater inequality. Small minorities command the resources of society, economy and polity in nations ranging from the Soviet Union, Cuba, Greece and Spain to the United States, Japan, Germany, Britain and Sweden."

In fact the distinguished professor at the Hoover Institution – business-funded research institute whose ideas have been hailed by President Reagan – remains at heart an old Trotskyist. In Britain now, thanks to Derek Hutton the description is an insult, an invocation of mindlessness. Lipset's Trotskyism, though learnt first hand in the hot-house politics of late thirties New York when Leon Trotsky was still alive, in exile, is cerebral.

It consists of an endless and scholarly teasing of the question thrown up both in Trotsky's writings and his break with Soviet Union: how could Marx have been so wrong in his prediction that the working-class revolution had to take place in the most economically developed country, that is the United States. Lipset acknowledges that much of his life's work is directly or indirectly related to the question of why there is no socialist movement in the United States.

Answering it has taken him, for example, into the study of social mobility, and into a series of comparative studies, especially the contrast between Canadian political culture (which has contained within it a socialist movement) and that of the United States. Explaining, as Trotsky tried, the triumph of oligarchy in the Soviet Union took Lipset to the writings of the German Robert Michels, and thence to his early and celebrated book about politics within printing unions, *Union Democracy* (co-written with Martin Trow and James Coleman).

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On a recent essay, Lipset, a practised polemicist is particularly scathing about the British sociologist Tom Bottomore, a Marxist, and his successive changes of direction on the subject. Lipset is clear that the argument that "total ideologies", especially the grip of Marxism on the working-class movements of the West, were and are in decline. This says nothing about a central theme of Lipset's work – the continuation of class and other conflicts in modern society, nor does it rule out ideological excursions by intellectuals.

The student movement of the 1960s, aided and abetted by intellectuals, did not disprove the end of ideology thesis. On the contrary, as soon as the students and intellectuals tried to reach out to the masses their ideology let them down. "Efforts to find a mass base, beyond an affluent minority of the intelligentsia, on the part of New Left groups which reject the established social democratic, communist and democratic parties, all oriented to the electoral system, have failed dramatically in areas as diverse as France, Germany, Italy and the United States."

"New Left" is something of a bohemian phrase in Lipset's vocabulary, not least because it has given rise to the misperception that Lipset and fellow intellectuals are on the right. "Almost all of us had reacted strongly against the New Left movement of the 1960s and early 1970s. Identifying with democracy as an end in itself and strongly attached to the values of scholarship, we had argued that the attacks by the New Left on the university and on the democratic political system were not only unwarranted but played into the hands of anti-democratic extremists, both of the left and the right. Hence we were regarded as renegades by the New Left."

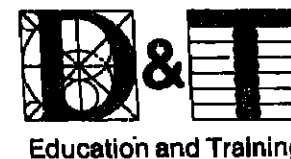
"We" in Lipset's account does have a family-like feel, and so it should for it includes people who grew up and were educated together in New York and still exchange Christmas gifts. Lipset brings together Bell, Glazer and Kristol, formerly joint editors of *The Public Interest*, Kristol's wife Gertrude Himmelfarb, a historian, Norman

Podhoretz, editor of *Commentary*, and his wife, the writer Midge Decter. Included also are novelist Saul Bellow and academic Sidney Hook together with Jeanne Kirkpatrick, a political scientist and her husband, Evron, executive director of the American Political Science Association. All are part of his "invisible college".

"What these people had in common, in addition to a strong identification with welfare state policies and support for trade unions, was a deep suspicion of the Soviet Union, advocacy of hard-line foreign military programmes and a passionate concern for Israel's security."

What happened, Lipset argues, is that these were all lumped together by the American socialist leader, Michael Harrington, as "neo-conservatives"; the label stuck and over the years came to be believed. "Since most prominent neo-conservatives, particularly the editors of the magazines most associated with the term, *Commentary*, *The Public Interest*, were Jewish, the development was seen as indicating a shift by a significant number of Jewish intellectuals to conservatism. In fact, however, only a few, such as Kristol and the Podhoretzes, became Republicans and conservatives, although Kristol is still a supporter of the welfare state. Others such as Jeanne Kirkpatrick and Richard Perle, while remaining welfare Democrats on domestic issues, were recruited to Reagan's foreign policy and defence teams."

Such a detailed explanation of positions is important, Lipset avers, otherwise false impressions are left, confusing for example these neo-conservatives and the New Right, an altogether different group of libertarians, pro-*laissez faire* thinkers. Seymour Martin Lipset may be sitting comfortably in the plenitude of a distinguished career at the Hoover Institution (where, incidentally, he points out a majority of the research fellows probably voted Democrat rather than Republican) but conservative he certainly is not.



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From general to the particular

P. N. Campbell argues the need for more specialized science degrees

Many august bodies, including the Royal Society, plead for a more general education in our sixth forms and university courses. In particular, it is said that the arrangement in Scotland, where students can enter the universities a year earlier than in England and Wales is much to be preferred.

But if one asks for objective evidence that the graduates from Scotland do better in life than those from the rest of the UK, there is a deafening silence. While one must have some sympathy for any plea for a more general education, and particularly one that develops character as well as intellect, a specialist education also has its merits as a foundation for life.

I seem to recall that many of the peers of the past specialized in the classics and it was claimed that the trained minds that resulted were well suited to tackle a wide range of problems. The exceptions were problems that depended on science. As the demand for more scientists gathered pace, so more graduates who had concentrated their studies on one or two fields of science were produced. A problem is that only a proportion of the product of such degree courses is really suited to a career in scientific research. This needs to be explained to the students at the start of such

courses so that, if they do not get an upper second class degree or better, they do not have a sense of failure. For this reason the specialist courses need to be modified as I will indicate later.

A specialist science education should fit a person very well for work in many fields of activity. There are of course certain pre-conditions, starting with the fact that the person must have done the course with enjoyment and enthusiasm. To have mastered, at least to one's own satisfaction, the intricacies of, say, quantum mechanics surely imparts a feeling of triumph and self-confidence so that the student feels equipped to grapple with any problem that demands the concentration of a chess player.

Even a routine practical exercise that calls for manual dexterity presents a useful challenge in the control of one's impulses while an open-ended project calls for initiative, perseverance, the ability to interact with experts and hopefully the ex-

perience of the joy that comes from research. A project will also show the student the importance of assessing critically the results produced by others and of evaluating conflicting opinions.

A good specialist education certainly has the possibility of developing the full potential of the student which surely should be the object. In this respect, it has many merits over an education that involves a cursory survey, with no time for critical analysis, of a wide range of subjects. Having made my case, I would now like to suggest some bad aspects of specialist courses which should be avoided and some good aspects that should be encouraged.

Clearly, from what I have said, a specialist course should not be so crammed with facts that the student has no time for critical appraisal. In this respect, the replacement of some routine practicals by projects is highly desirable. The student, however, must enjoy the work and be prepared to become immersed in it, just as the good research worker gets his life out of perspective so that the work, for at least a time, becomes the top priority. In order to engender enthusiasm, the staff must be enthusiastic for the effect is easily transmitted from teacher to student. Another trick is to give the student a choice in the

selection of the project and lectures. Concerning the work itself, and the attitude to work, I think we need a lot of innovations. One that the biochemists at Leeds University have used for many years is for the student in the written exam to be faced with a research paper from which the summary has been removed. The student then has to write a 250-word summary and comment on the development of the subject since the paper was written. We used to find that this really sorted out the students and yet it is surely the kind of problem that is very often faced in many walks of life.

The development of posters at meetings whereby the presenter has to attempt to interest non-experts in his subject seems to me an excellent teaching development. This can supplement the verbal presentation of the project already referred to. We find our medical students really excellent on such occasions and they often put the teachers to shame.

A distinguishing feature of Oxbridge is the essay and in this they are surely right. It is, however, not easily transferred to other universities who lack the staff and facilities. It would be good to see students nominating scientists in their own field for Nobel Prizes and writing an appreciation of the chosen person. Perhaps a session

in which grant applications are critically assessed and scored could be entertaining and educational for all concerned. Most of us have thought so when we have become involved in such exercises in later life. Perhaps even a premature obituary from time to time might enliven the teaching.

As I indicated at the beginning, my object in suggesting these innovations is not mainly for the good of the excellent potential research student, but for those who do not achieve an upper second. We need to help such students to be successful in a wide range of careers including teaching, publishing and marketing. This is where the ability to evaluate a scheme critically, present an intellectually difficult piece of science to non-experts, and knit together a multidisciplinary team would come in very useful. These are the talents which are sadly lacking in so many of the graduates leaving our universities. The answer, I contend, is not necessarily to widen the education, but to re-examine the objectives and the fabric of the courses, whether the students be generalists or specialists.

The author is head of the department of biochemistry and director of the Courtauld Institute of Biochemistry at the Middlesex Hospital Medical School, London.

Excuse the pun, but . . .

Walter Redfern defends a much-maligned figure of speech

"Loose connections" can stand for: (1) an approximate association of ideas; (2) a hint of madness; (3) raffish behaviour; (4) a malfunctioning mechanism; (5) distant contacts; (6) casting off moorings; (7) hit-or-miss action. When Sir Thomas Browne spoke of "antithetical analogies", he was actually referring to disjunctive joints, but he may also have had in various parts of his mind a deep-rooted human antic.

Language plays with itself (but has not yet gone blind). The punny bone, for instance, is so called, perhaps because of its proximity to the humerus; and, more perversely, because it rarely tickles when you bang your elbow.

Is it our greed that makes us wolf extra helpings, our desperation that grabs at further chances, our devious complexity that relishes second, or multiple meaning? Besides, we cannot avoid word-play any more than we can micro-organisms (well likened puns to ubiquitous fleas) on our flesh or hair; or than clichés.

The more timorous apologize unnecessarily for the inadvertent, and even the wilful, pun. As against the phonic coincidence or collision (bler, beer), I favour the accidentally pointed, as in Browne on dreams: "The Ivory and the horny gate; false dreams out of the ivory gate, true out of the horny." In waking life as in dream states, we can reveal our true desires, indirectly, by our turn of phrase.

Coleridge, whose taste buds had their doubts, yet claimed that there are states of being or situations where punning is "strictly, in a philosophical sense, a natural expression of natural emotion". It can arise, then, from the sweet or sour sense of being alive. More often, though, it stems from "a mingled sense of injury and contempt of the person inflicting it, and, as it seems to me, it is a natural way of expressing that mixed feeling." That is getting warmer. The natural has to have a variable content other than simple contentment.

Are we even in control? Freud judged that, as with coincidences in action, language too can meet us halfway, through what he called "linguistic compliance", though of course it takes two opposite and deliberate motions to complete a true encounter.

This view would grant us more dynamism than Lacan's belief that "the unconscious things are what they sound like. Paronomasia is one of the

tropes that reveal the unconscious." Leavy continues this account by reminding us of Lacan's series of plays on words: "le nom du père", "le non du père", "les non-dupes errent", and then adding: "On at least one occasion he coyly referred to his women disciples as 'les nonnes du père', whereby he proclaimed through a word that he is as far as they are concerned - God, father and the law". Lacan punned to enthrall his neophytes and, in so doing, insinuated that he was their unconscious.

In *Justine*, the Marquis de Sade, many of whose children were not born until 150 years after his death, saw puns (eg Jesus's on Peter) as good cause for atheism. His spokesman, arguing that a religion which indulges itself in this jocular way cannot be taken seriously, has admittedly ulterior designs on the girl he is thus verbally destabilizing.

Sade's contemporary, the more innocently Judic Marquis de Bivry, was French, *bivry* meant beaver. The ancient legend of the beaver biting off when cornered, its own testicles, comes from the pseudo-etymology "Castor a Castrando". If you can't beat them, disjoin them.

Puns go back at least as far as the first written records. If prostitution is the most ancient commerce, playing with words is the oldest sort of in-trade. Puns are one of the very few things common to all peoples. Yet they are the underdogs of language, the spat upon; these agents of central intelligence are marginalized. The would-be plain dealers of discourse see punners as slysters, and on such people puns produce an alienation effect undreamed of by Brecht.

The problem is that stupid, clanging, meaningless puns are stuffed in the same basket as pointed ones. Yet these latter, true laxatives, loosen up cognitive speech and thought. And even the clang or rhyming aspect can take its toll. "That rings a bell," we say, like Pavlov's pooch. Our minds are mini-Rogers. Why have human beings permitted language to become so shot through with double and more meanings? Do we, as individuals, have any say in this mysterious process? Is it a matter of carelessness, or care?

Maybe we want to retaliate for a long and bitter exposure to the double-talk of authority in all its forms. Anthony Burgess's 1983 glosses Orwell's concept of double-think: "Unity of thought can only be achieved



George Orwell and Anthony Burgess: "double-think is a grim joke"

by forging a deliberate technique for dealing with contradictions. (Note that when you came to that word *forge* you had to perform a very rapid act of double-think. You were, in a context that suggested cheating, ready to give it the meaning of falsifying a cheque or making counterfeit money. But then you had to give it the primary meaning of making, fashioning, with an aura of blacksmith honesty about it.)

Playing the enemy at its own game always entails this kind of ambivalence. Thomas Hood, an expert in the practice of punning, held hopefully that "a double meaning shows double sense". He would have agreed with Burgess, and Orwell, that "double-think is also a grim joke", though whom it is on is unclear, or nuclear.

Ian McEwan has written: "Puns are disruptive. In Shakespeare, they are commonly the means whereby one character subverts the argument of another, silences him and wrests the centre of the stage from him by a retort which leaves his serious-minded opponent at a loss." Shakespeare ante-dated 1984, and our punning gets blacker all the time, more bitter and twisted. Irony, litotes, euphemism, oxymoron and other oblique modes have always been available and exploited, but free indirect speech, that authorial double-talk which plays between irony and empathy, is a product of the less sure modern mind.

In the supposedly new sciences, the netherworld of particle physics fast-becomes an oxymoron like "heavy lep-

ton" (*lepton* = lightweight), or a pun like "charmed quark" (charmed, because both aesthetically satisfying and warding off the evil eye of incomplete theories). An earlier state of this art picked "atom" (= indivisible) - the most basic oxymoron of all. Oxymorons, like punners and frontists, love to have it both ways, the licit and the condemned, as does the Spoonerism, that mixture of chiasmus, rhyme and distraught mentality.

Rhetorical figures spill over each other, as portmanteau-words show. These put two words, or segments, together, as the pun collocates two meanings. The danger, in changing perhaps one letter or in using a cluster of consonants when making a blend, is of passing unnoticed. Our habit of skimming, of "reading for meaning", ensures that we read generally for the obvious meaning. Subconsciously we often amend an assumed inaccuracy. This is the hasty inertia of correctness. We need to become beginners, to read in slow motion. The best collocations are these hybrids offer the comfort of familiarity and the shock of the new; above all, the pleasure of the appropriate. Among the many French counterparts to the English "portmanteau", I cherish "signification".

"Tolerance", in science, industry or commerce - a permissible deviation from a norm - is also a useful model. The world should be one vast "maison de tolérance". As the French proverb has it: "Presque et quasiment empêché de mentir": almost and near-

enough keep us from lying. The Anglo-Latin version is "Almost was never hanged".

The Latin term for this area of acceptable play was *medietas*. It could be our panacea, our placebo, our nostrum for, at root, all nostrums are ours, for the taking. Rounding up and rounding down are everyday habits in statistics, those numerical metaphors. "As near as dammit," we say. The French has: "Il était moins une". Rigour is best left to corpses. The French term for a nearpun (and usually the best kind) is "un 8-peu-près". We need a counterpart. Perhaps "wanton" - loose, libidinous, and sometimes not up to the mark, as in "she found me wanton".

For choice I wear baggy trousers; I prefer loose fits. To conclude at a loose end (the opposite of tight-end, those backward young male fannies that so appeal to forward women fans), is my theme bull, or bullion? I return to Browne: "There are many things to be taken in soft and flexible sense, and used to be called upon the rigid test of reason". Perhaps the bull is at least Irish. I would say that punning keeps the mind and the ears on their toes. As it is laxative, it also keeps them on the run, this diarrhetic.

The elitis - Marguerite Yourcenar this time - claims: "Most people think too little to think double." Is punning a preserve of the select? How can it be? In its own inimitable way, it is a homage paid to the culture we all breathe in. Just as all writers feed off and adapt previous literature, so all of us recycle words, their etymological shiftiness, their unstable connotations. We like them, dip into public treasures; we are alike remembrancers. This natural resource, unlike fossil fuels, is inexhaustible.

For Plato, language had origins both criminal (Hermes the thief) and sensual (Pan his son). Language is originally slang, a secret tongue shared by all. Of course, Hermes (or Mercury) is ambiguous, mercurial. He sometimes told the truth, so that none were ever quite sure where they were with him. Mercury is both slippery and poisonous. "On joue à qui perd gagne sur les mots". Pierre Reverdy concludes that what we play on words is loser take all.

Are punners more concerned with the spirit than the letter, in that the same printed signs can yield differing sounds and meanings? Are puns, like semantic calques, false friends? Tipping the wink is often misread. But the underhand can still be above board. It takes a leap - of imagination, fellow-feeling, recognition, audacity - to make and to register word-play, to bridge the loose connections.

The Americans say "Different strokes for different folks". Swimming? Corporal punishment? Careses? Calligraphy? Making friends with ormsmen? Having a thrombosis? Making love?

The author is professor of French studies in the University of Reading.

NOTICE BOARD



Casper Neher was perhaps the most innovative stage designer of the 1920s. His contribution to Bertolt Brecht's revolutionary conception of theatre is still little known. An exhibition of Neher's work is on show at the Riverside Studios, Hammersmith, London W6 until February 16. Illustrated above is a scene from *Mahagonny*, the Brecht/Weill collaboration, and a young Peter Lorre (left) acting to type as Galy Gay in *Man Equals Man*, directed by Brecht in 1931.

Promotions

STIRLING: Professorship of Robert Hart (economics), Irvine Lapsley (accountancy and business law), John Sargent (biological sciences), Charles Ward (accountancy and business law).

Events

The second John Hanson memorial lecture in the University of Essex is to be given on January 28 at 5.15pm in the Main Room of Exeter's Amory Building. The speaker will be Professor R. A. H. Cooper, professor of social

Appointments

Robert Allison has been appointed Addison Wheeler Fellow in the University of Durham department of geography.

UNIST: Lectureships: Mr T. J. McCarthy (civil and structural engineering); Dr D. B. T. Morris, Miss M. C. Norrie and Dr S. W. Murad (computational); Mr M. L. Walker (instrumentation and analytical science); Mr R. Dufuth and Mr M. P. Marchington (management sciences); Dr A. M. Cameron and Dr R. Freer (metallurgy and materials sciences); Dr P. K. Browning and Dr A. M. Gadian (pure and applied physics).

KENT: Lectureships: Dr E. Horne (computer systems engineering); Dr R. J. Newport (condensed matter physics); Mr W. A. J. Waller (computer systems engineering); Dr M. J. Went (synthetic organic chemistry); Dr A. J. Williams (international relations); Mr N. K. Clark (social psychology); Mr P. C. E. Dore (social work); Mr A. M. Ransley (accounting). Kent has also announced appointments to visiting professorships to R. C. Lyle Ltd. and to C. A. Hume of the department of mathematical physics, University of Adelaide; together with a visiting lectureship to Mr P. E. Dorell, partner in New Enterprise Development and a visiting lecturer in the University Business School and the City University Business School. Temporary lectureships have been given to: S. J. Forester (biology); H. J. Gray (social psychology research unit); J. I. Lukeman (social administration); J. Desmet (general social research unit); D. E. Walle (social administration); T. Ball (transport systems and operational research).

administration, on the subject "Cash and Cash". The University of Warwick department of continuing education has organized a day school on the theme "Mining and Social Change" to be held tomorrow, January 18. For full details and registration contact 0203 523523 or 0214 0714 0718.

Honorary degrees

MANCHESTER

L.D.: Dr Frederick Bewick, I. bursar of the university, Mr J. R. Briston, chairman and director of Shell UK Ltd, governor of the Institute of Economic and Social Research; Mr Brian Rye, former secretary, now secretary-general, Mancunian.

DSc: Professor Frederic Jones, chancellor, Deakin University, Victoria.

MD: Dr Anthony Lane, medical officer, North Western, general Health Authority.

MA: Mrs Sophie Haldow, university court and council; Mr J. Haldow, secretary to the appointments board; Miss M. Haldow, headmistress of White School.

MS: Mr William Simpson, independent, department of unit 1984.

WALES

MA: Mrs Marion Ennes, book reviewer; Mr Kenneth Loveland, critic and journalist; Mr M. Thomas, for contributions to music of Wales.

MD: Mr Magdi Habib Yousof, a distinguished surgeon.

L.D.: Mr Raymond Edwards, intension of contributions to the arts; Mr H. Jones, in recognition of his contributions to literary and religious life of Wales.

DD: The Rev. Lewis Valentine, a recognition of contributions to the religious life of Wales.

Grants

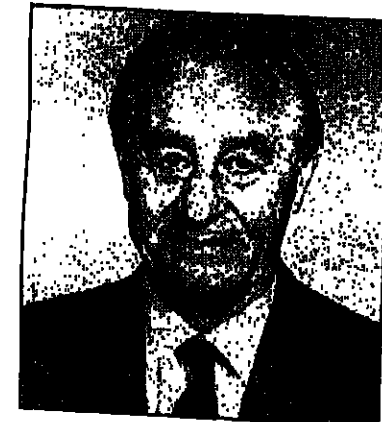
OPEN UNIVERSITY: Dr P. R. Lefevre, £47,750 from British Library (design aids for table construction and editing); Dr K. Attenborough, £36,800 from Department of the Environment (noise levels inside and outside dwellings); Mr C. R. Hammett, £29,760 from ESRC (role and structure of flat conversion market in London); Dr D. A. Blackburn, £20,849 from Cullum Laboratory (measurement of hydrogen permeation in tritium material); Mr I. McNay, £10,675 from Further Education Unit (report on education management in further education).

BIRMINGHAM: Dr J. E. Davies, £29,500 from Wellcome Trust (effects of charge of a substrate on the migration, membrane activity and metabolism of osteoblasts); Dr E. J. Johns, £24,929 from National Kidney Research Fund (renal nerve control of kidney function by somatic afferent sensory receptors); Dr P. F. Searle, £49,103 from MRC (molecular mechanisms of metallothionein gene regulation); Dr G. K. Dhoor, £99,244 from MRC (monoclonal antibodies to myosin heavy chains and their use in studying muscle development); Dr A. H. Barnett, and Dr A. R. Bradwell, £22,743 from MRC (HLA-DQ B-chain and C4 genomic sequences in insulin dependent diabetes); Dr M. C. Sheppard, £13,021 from Central Birmingham Health Authority Endowment Fund (cloning of TSH receptor gene); Dr I. W. Booth, £21,080 from Central Birmingham Health Authority Endowment Fund and Children's Hospital Centenary Research Fund (defective small intestinal brush border membrane transport in pathogenesis of protracted infantile diarrhoea); Professor E. G. Knox, £60,700 from Commission of the European Communities (geographical variations of medical and non-medical radiation and risk of cancer in children); Professor A. W. Nienow, £36,006 from SERC (development of in-situ power measurement and support for associated mixing studies); Professor A. W. Nienow and Mr A. N. Emery, £163,070 from SERC (teaching company programme with Life Sciences Laboratories Ltd - plus a grant of £29,535 from the company); Professor J. Bridgewater, £17,241 from International Fine Particle Research Institute (attrition); Dr P. Bakhtiar, £118,473

from SERC (study of nucleating and wet steam flows over blade cascades); Professor M. Loreto, £51,988 from Rolls-Royce Ltd (research in low speed); Professor P. J. Butler, £29,818 from Natural Sciences and Engineering Research Council (effect of environmental conditions on swimming performance of trout); Professor G. C. Morrison, £18,285 from SERC (nuclear structure group: workstation upgrade); Professor G. C. Morrison, £142,529 from SERC (researches in nuclear structure); Professor G. C. Morrison, £126,429 from SERC (researches in nuclear structure); Dr T. D. Boynton, £19,473 from United Kingdom Atomic Energy Authority (nucleonics study of sub-critical reactor for ISIS); Professor A. P. Willmore and Dr G. K. Skinner, £10,000 from SERC (hard

x-ray imaging: reflight of Spacelab 2); Dr N. Adams and Professor D. Smith, £57,575 from SERC (studies of ion reaction important in interstellar clouds); Dr K. J. Edwards, £29,818 from Natural Sciences and Engineering Research Council (on molecular impact and escape of Western City of Birmingham (feasibility study on developing a commercial energy policy for Birmingham)); Professor T. M. Davies, £104,850 from MRC (physiology of ageing muscle with particular reference to exercise and training); Mr T. R. Davis, £16,693 from Home Office (determination of European national handwriting characteristics); Dr S. Simons, £53,860 from University of Pennsylvania (radio assist devices energized by skeletal muscle).

Porter is new chancellor



Sir George Porter, director and Fullerian professor of chemistry at the Royal Institution, recently elected President of the Royal Society, is to succeed Sir Alan Hodgkin to become the third chancellor of the University of Leicester.

Among his many awards and distinctions is the Nobel Prize for chemistry which Sir George won jointly in 1967. He won the Kalinga Prize in 1977 and the Faraday Medal in 1980. Among his publications are *The Machines and The Natural History of a Sunbeam*. In the 1960s, he was responsible for the acclaimed television series *Laws and Disorder*.

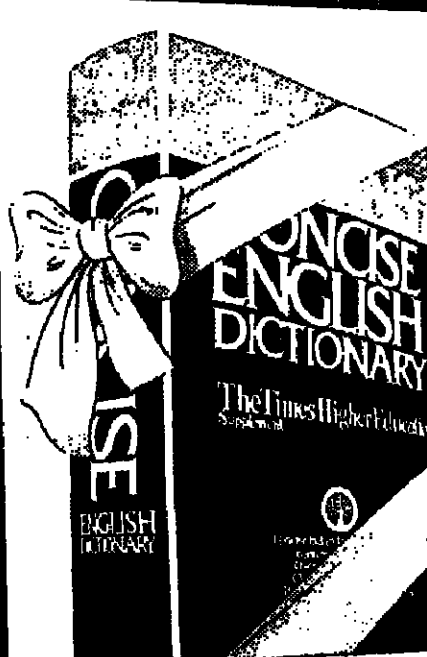


Saturday January 18

11.00 Accounting for Managers. Keeping the best open. (P671: 2).
11.50 Introduction to Marketing. Corporate Strategy. (P677: 1).
12.15 Ready for Pregnancy Planning & Happy Birth. (P677: 1).
12.40 Health and Productivity in Dairy Cattle. The by appointment. (P60: 3).
13.05 Biotechnology. UK. (P651: 2).

Sunday January 19

8.00 GCSE. General Issues Part 2. To be announced.
10.25 GCSE. Experimental Science.
10.48 Science Foundation Course. Preparatory maths - algebra. (S101: 2).
11.00 Open Forum. Information programme for OU students.
* Repeated programme.



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Ernest Boyer

Suspicious aroused by the new breed of witch-hunters

Higher education in America is caught up in a new debate. Last summer, a new organization called Accuracy in Academia was formed to stop the teaching of "inaccurate information" and counteract "liberal bias" in America's college classrooms. By November, the conservative watchdog agency had generated much national media attention, raised \$50,000 in unsolicited contributions, and placed 100 campus monitors on more than 100 campuses across the country.

Accuracy in Academia recruits student volunteers and retired people to enrol in classes in areas such as political science, economics, history and sociology. According to founder Reed Irvine, "the idea is to see whether kids on college campuses are being fed disinformation or misinformation." The organization aims to "expose what's going on, and by exposing it, hopefully persuade those responsible for it to do something about it."

Accuracy in Academia has claimed that there are some 10,000 Marxist professors on American college campuses (there are approximately 800,000 full and part-time faculty in the United States' colleges and universities) and indicated that it hopes to expose many of them. Since its founding, AIA has been creating a network of sympathetic contacts and ordering college catalogues. Eventually, the group plans to monitor "problem" courses at many of the nation's public universities and a sampling of private ones.

In November, the organization began publishing a monthly newsletter to spread the word on specific examples of liberal bias and inaccuracy in college classrooms. Its first targets were two Arizona State University professors, one of whom was cited for teaching anti-nuclear propaganda in a political science course. The organization requested that the university rename the course to reflect alleged biases and asked its readers for donations to pay for alternative texts for students in the class.

The university administration's firm rejection of the allegations was applauded by Arizona State professors, even as they warned of a growing chilling effect on the campus. "This kind of anxiety," said president J. Russell Nelson, "is damaging to the academic setting." And according to one professor, AIA's presence "has poisoned the student-faculty relationship."

"Truth is a goal to be pursued, not a commodity"

Accuracy in Academia quite properly has sparked much reaction - nearly all of it negative - beyond the campus, too. Critics have likened AIA to the witch hunts of the McCarthy era. Most of us thought that in our lifetime we would not see a recurrence of the intimidation tactics of that period. By no means is there on campuses today a level of fear and suspicion approaching that of unhappy era. But the signs are not healthy.

The steady drumbeat of concern has even been heard in the Reagan administration's department of education. Secretary William Bennett, a vocal proponent of teaching values in elementary and secondary classrooms, has labelled AIA's efforts on college campuses a bad idea.

In a recent edition of the *Washington Post*, the Rev Timothy Leary, president of Georgetown University, wrote that "narrow-minded attacks such as AIA mounts ignore the moral openness that makes a university possible". In the arts and humanities,

Healy said, teaching "aims to bring young minds into contact with great works, great ideas, great beauty. The resulting explosion is unpredictable as an earthquake and as likely to change the spiritual landscape as a spouting volcano. It may be possible to bang into greatness while looking for it, but it's unlikely."

The danger could extend beyond the campus

At a recent meeting of the American Association of University Professors, the major professional organization representing American faculty, Joseph S. Murphy, chancellor of the City University of New York, called the very concept of Accuracy in Academia selectively misleading. He said that the threat from AIA, while not large, was real, and he cautioned educators in his audience to remember that "truth is a goal to be pursued, rather than a commodity to be packaged."

Eleven of the major organizations representing various American higher education interests considered the threat real enough jointly to endorse a statement on academic freedom. The recently issued paper said that Accuracy in Academia's activities posed serious danger on more than one front.

Some observers feel that the danger posed by external policing could extend beyond the campus to state legislatures which participate in funding and governance decisions for public colleges, and further to the agencies which regulate federal institutional and student aid to all types of colleges and universities. Indeed, spreading the word to alumni associations and taxpayers in general is a stated goal of Accuracy in Academia.

Another case against the watchdog group was made by Midge Deeter in a recent *New York Times* opinion column. While panicking Accuracy in Academia, Deeter, a noted neoconservative (the common term for former liberals who have moved right) wrote that America's higher learning institutions were in a deplorable condition. Their state, she said, was attributable to the mid-1960s when the country's college and universities simply sloughed off the burden of their proper authority and proclaimed themselves no more than servants of the gathering radical political fashion.

A related spirit, she believes, exists today in lectures, rallies, and propaganda films that spread across campuses when the US government begins to consider some new foreign policy initiative. Deeter's argument, then, is against AIA's method, but supportive of its motives. While acknowledging that there is no accurate way to teach, Deeter offers a frightening conclusion: the only way to deal with words and ideas and teachings one deprecates is to offer better words and ideas and teachings. The way to deal with dishonest efforts at persuasion is to compete with them by providing honest ones.

Educators and the public alike, as philosopher Sidney Hook has said, assume the professor to be a free agent, not under orders from an outside group to indoctrinate or cook his evidence, not bought, not a fanatic committed to a predetermined conclusion regardless of evidence. The danger here, of course, is not simply that Accuracy in Academia is taking individual professors to task for their teachings. Rather, it is that a climate of suspicion and distrust has begun to creep in on the tradition of openness and inquiry which have been hallmarks of American higher education and of our democracy as well.

Stress, fatigue, depression and anxieties arising from academic, financial, social and sexual problems are all recognized pitfalls of student life, subject of considerable research and routinely dealt with by counsellors and medical staff. Homesickness, however, is still not fully identified as a problem affecting adults. Even so, as Shirley Fisher describes below, it can be just as serious as other, more fully understood problems and it seems to touch, at some time or other, a surprisingly large proportion of the student population.

With many academics and researchers beginning to feel the stresses and strains of maintaining morale and standards of work when the universities and colleges are under economic siege, it is important not to lose sight of the fact that university life also provides a number of sources of strain for the student.

Traditionally, there has been concentration on competitive pressure as a main source of stress. David Meacham's book *Studying Under Stress*, written in 1962, underlined the adverse effects of the threat of examinations as major events in the life of a student and identified the profound effect these threats are likely to have on the well being of not just the student but sometimes family and friends as well. Ivor Mills, argued that substantial increases in the incidence of depression, anorexia nervosa and suicide among young people could be attributed to the pressures for success in a capitalist society and the raised academic demands apparent in both secondary and tertiary education.

Recent research by the Stress Research Unit, of the University of Dundee department of psychology, has suggested that there may be other important and yet neglected sources of pressure on students: the transition to university and the separation from family and home make demands to which students must eventually adjust. The autumn term will, for some students, have been a time of homesickness characterized by emotion, grief and preoccupation with thoughts of home. In spite of the distressing effects with which it is sometimes associated, there has been no research on homesickness and its correlates.

The transition to university involves simultaneously a break with previous lifestyle and exposure to the demands of the academic environment. For those who leave home to become residents, there is the added change brought about by loss of immediate contact with home.

Research since the beginning of the century has suggested that there is a link between social or geographical mobility and the health of the individual. Migrant populations and cultures undergoing change through industrialization have been found to be at risk for infectious diseases such as tuberculosis as well as chronic conditions such as cardiovascular disorders. The psychological significance of a relocation is underlined by the finding that it is the third most commonly cited precipitant in the immediate life history of clinically depressed patients.

The term homesickness is commonly used to describe all aspects of adjustment difficulty following a move to a new residence. Dictionary definitions of the term include "depressed by absence from home" and "pining for home". As far back as the 17th century, physical symptoms have been associated with the mental state

produced by moving from home. In 1678, Harder introduced the term *nostalgia* from *nostos* (Greek for "return home") and *algos* meaning pain or sorrow. He coined the phrase *maladie du pays* to describe the total state of homesickness and cited changes in customs and food as causal factors.

Students and boarding school pupils asked to define homesickness typically use phrases such as "missing parents and friends"; "missing previous life"; "loss of security"; as well as more emotionally loaded phrases such as "crying"; "loss of appetite"; "feeling panic and distress". However defined, about 60 per cent of samples of students reporting having the experience of homesickness. There are no apparent sex or age differences in those reporting homesickness. About 5 to 10 per cent report the experience as prolonged and distressing.

The evidence suggests that there is lowered concentration and raised inefficiency in those who are homesick. There is also evidence of raised reporting of non-traumatic ailments in boarding school children, resulting in more days off school. Studies in the University of Manchester have recently shown that there is an association with lowered general health in students. Work with Dutch researchers who constructed a questionnaire for assessing adaptation to college environments indicates that homesickness has an adverse effect on adjustment to university.

It is worrying that we have found that homesickness is not just confined to the first term or even the first year of university. It can still be present in populations of second, third and fourth-year students, although the incidence declines to about 30 to 40 per cent. Populations of students who choose not to leave hall at the end of the first year have been found to be different in many respects from those who leave to share flats and there is some indication that they are more likely to be homesick and to have adjustment problems.

A central issue is whether homesickness is situationally determined or whether there are vulnerability factors due to life experience or personality. A number of findings have indi-

cated that the new environment and the extent of exposure to personal expectations influence homesickness reporting.

Increased distance of the move increases the homesickness for students. Hence in the actual number of visits (those who report homesickness) do not, so the distance effect is a psychological factor. The does not influence homesickness boarding schools perhaps because likely to be restricted with visits, so distance is no longer a factor.

Personal move decreases homesickness for students. This suggests either that responsibility have adverse effect of the move but perhaps reporting reduces the stress.

Aspects of the new environment are lower in those environments consistent with who report locations in adult research in the population of students, a particular aspect of satisfaction in the homesick group adaptation and social interaction.

As part of the research was designed and implemented two months intending students become residents at prior to leaving and on occasion after university and results suggested five weeks in the new environment in terms of adjustment, they were prior to leaving, adjustment, distinguished by biobias. The question remains whether the raised level of adjustment stress or symptoms of vulnerability, whether there is an interesting result: The study on homesick or not

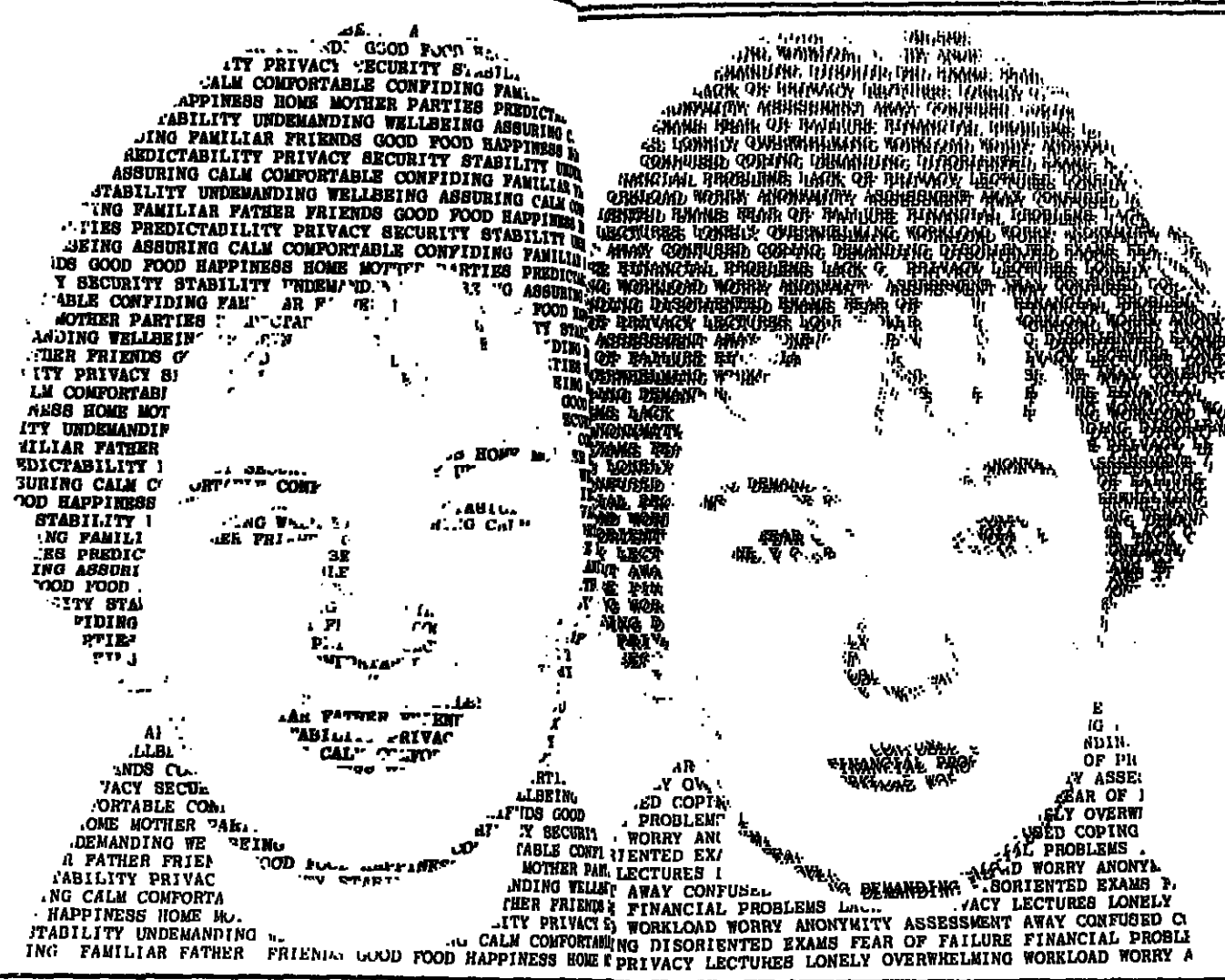
showed a rise in depression and absent mindedness following the move to residence at university. This suggests that the transition to university is a stressful event for all who undertake it. We have as yet no evidence to allow us to conclude that this reaction is temporary. Analysis of self-reported stressful problems by students in the first term indicated that academic concerns were paramount. They were reported by 62 per cent of the group and consisted of fear of failure, fear of the demands made by academic work, and difficulties with evolving work routines.

Second, on the list of frequently reported problems were financial worries. Thirty-six per cent of students reported being worried by the need to make grants last and there was fear of not being able to buy necessary books in order to keep up with academic requirements. There was also guilt expressed concerning ultimate dependence on parental support. Third on the list were social concerns: students in residence reported feeling overwhelmed by too many people and general lack of privacy. They expressed feelings of loneliness and missed the confiding relationships they were used to at home.

Taken collectively, these studies indicate a need to give more consideration to the pressures on students who leave home for educational and vocational training. The transition from home to residence elsewhere and cope with new demands is not always accomplished easily and it would seem affects all students adversely. Academic environments and the institutional aspects of halls of residence may not provide the easiest conditions for adjustment. The current financial climate may serve to increase the pressure for success because of limited career prospects. This in turn may exacerbate other strains. About 17 per cent of those who reported homesickness indicated that they had not felt homesick on arrival, but had developed the response as the term progressed. Thus the homesickness response may represent a reaction to strain.

One interpretation of the current results is that the transition to university is stressful and that those already vulnerable are more likely to turn away from the challenge and grieve for the security of home. The homesickness response would then reflect a failure to cope with stress. This analysis suggests that more time and resources should be devoted to finding out about all aspects of the patterns of stress in student life with particular attention to creating a "user friendly" academic and residential environment for first-year students which take account of the impact of financial strain and insecurity.

The author is senior lecturer in the department of psychology and director of the Stress Research Unit in the University of Dundee.



Sorting out Marx's confusing legacy

by Peter Abell

Making Sense of Marx
by Jon Elster
Cambridge University Press, £32.50
and £10.95
ISBN 0 521 22896 4 and 29705 2

Two interdependent questions inevitably arise in connection with any attempt to make sense of Marx's voluminous writings: can the attempt, in fact, be turned into an achievement and, if it can, is it worth the effort? Jon Elster answers both questions in the affirmative, though in so doing he engages in some pungent criticism and theoretical "reconstructions" of quite heroic proportions. No simple pangs here: Elster is perfectly prepared, on the basis of painstaking textual analyses, to accuse Marx of theoretical inconsistency, lack of clarity and even utter confusion, but he does believe, nevertheless, there is much to salvage. Furthermore, as he recounts in his introduction, having experienced at first hand, but fortunately rejected, Althusserian Marxism he is not inclined to expose us to the excesses of neo-Marxist vocabulary. Indeed Elster writes with commendable grace and precision and intellectual speaking finds common ground with the modern analytic Marxian tradition where the writings of John Roemer and G.A. Cohen serve as exemplars.

His book which has matured in the writing over a couple of decades can be unreservedly recommended even by the demanding standards of contemporary social science. It is indeed a matter of considerable rejoicing that we are at the moment witnessing the emergence of a school of Marxian thought where the insights of analytic philosophy and neoclassical economics combine to rescue what is of worth in Marx from the obscurantists who have unfortunately proliferated in recent years.

Making sense of Marxian theories, must, of course, take logical precedence over ascertaining their descriptive and predictive potential. Like anyone else Marx might make sense but might at the same time be wrong. Preoccupied with both issues Elster, however, wishes his various "reconstructions" to stand in their own right as contributions to social theory. As many before Elster have concluded, there is a problem; Marx attempts to keep so many balls in the air at the same time he was a very considerable philosopher (with theories of human nature and freedom of Hegelian inspiration), a more than competent economist (with specific theories of production, profit exploitation and value), an uneven

theoretical historian (with the theory of historical materialism), a startlingly brilliant sociologist (with the theory of class) an erratic political theorist (with his theory of the state) and finally, a disgruntled revolutionary activist. The most ambitious interpretation we might attach to a programme which would seek to make sense of Marx would be to demonstrate both the conceptual clarity and mutual coherence of these various strands in his thought.

It would have been theoretically a very significant achievement, for instance, if Marx could have demonstrated how the grounds upon which he (arguably) condemned capitalism provided the motive power for the class struggle which, in turn, revolved around the manner in which the "relations of production" hampered the "forces of production" and led to a "declining rate of profit" and shift in the "rate of exploitation". It is, in fact, often assumed in Marxist circles that the master himself actually brought off this conjuring trick. But he did not and Elster (with the help of Roemer) shows both how and why not. It is, thus, no use searching for sense in Marx in this fundamentally synthetic manner. But what of the individual strands? Here things look much more promising, especially if we are prepared to go along with some of Elster's more audacious reconstructions.

These will, however, not always be to everybody's liking. Elster adopts an individualistic approach - something which will not endear him to many Marxists - though which I for one find perfectly convincing. All social phenomena - their structure and change - are in principle, if not in practice, deemed to be reducible to and deducible from the goals, beliefs and actions of individuals. Elster thus takes a firm stand against those who see the social as something that exists apart from the individual actors. He then argues that the individual actors - be they capitalists or workers - are merely placeholders in the relations of production; the carriers of dispositions which are the ineluctable consequences of an all pervasive socioeconomic programming. Individuals, even the "grain" of their social location in an unwitting way - they carry on their various activities, while systematically failing to comprehend the structures in which they are enmeshed and reproduced. Choice is illusory and the worker is nothing more than the "passive embodiment of his consumption bundle". Though it is perfectly possible to arrive at such a reading of Marx, it would be, as Elster demonstrates quite at odds with much of what he wrote. Furthermore, Elster sees no reason to



Jon Elster

JOHN EDWARD LEIGH

incorporate such ideas into a modern reading of Marx. Situations where feasible alternatives are circumscribed by socially inculcated beliefs which apparently deny opportunities which are objectively available can, Elster avows, be handled as a special limited case of a more general model which bestows rational choice upon the individual.

Elster's reductionist preferences are well brought out in his essentially Roemerian treatment of Marx's theory of classes. To Elster a class - he detects mention of 15 in Marx - comprises a group of individuals who by virtue of their endowments are rationally compelled to engage in the same sort of economic activities. Endowments are widely conceived to include tangible property, intangible skills and more subtle cultural habits; activities cover a limited but exhaustive set of productive behaviours including selling and hiring labour power, lending capital, hiring land and so on. The productive relationships which optimize individuals are compelled to enter into set up patterns of exploitation (conceived

as a reconstructed form of transfer of surplus-labour) which are more or less continuous with class boundaries. Class mobilization and conflict, leavened by an awareness of exploitation are for Elster - very much the historicist - the driving force of social change.

Radical individualism also supports which he defines as the "ability of individuals to overcome the free-rider problem in pursuit of their common interests. Since organizing along class lines entails costs (to the individual) and any benefits tend to come collectively whether or not the costs have been incurred, there is always the (rational) temptation for the individual to reap the benefits and not incur the costs of class action. If all were to follow suit no collective benefits would of course be forthcoming. Following Mancur Olson (*The Logic of Collective Action*) Elster shows much ingenuity in the way in which he folds many traditional Marxist ideas into a semi-formal treatment of consciousness in terms of the prisoner's

dilemma game.

The theory of historical materialism (did Marx want to say that the mode of production ultimately "determines" the superstructure or the use of the mode of production?) is also given a textual analysis where Elster chooses the point of departure - though not all. Elster demonstrates, if not the reality of divining who was really driving at. There are lengthy sections on the state, its modes of production, dialectic materialism and much else, all of which bear the stamp of Elster's pan epistemology but which also bring the rich and often confusing in which Marx left us.

Elster in this opening offering new series from Cambridge University Press entitled *Studies in Marxian Social Theory*, has certainly laboured long and hard - but was it worth the effort? From the point of view of Marxian scholarship I am sure an answer must be yes, but the relevance to contemporary social theory is more questionable. It has been a very clear now for a long time that many of the essential elements in Marx's labour theory of value (except the extremely restrictive context of homogeneous labour) which underlie the theory of exploitation and class conflict, so is the idea of the declining rate of profit. Furthermore, the theory of historical materialism is open to many interpretations none of which appear to fit the facts. Marx's philosophical excursions are valuable but cannot sustain contemporary appetites and unfortunately no serious social theorist could now appeal to the inevitability of socialism. Elster's analyses certainly confirm these conclusions, but despite his good reconstructions of the Marx weltanschauung I left the book with a uneasy feeling. Such prodigious scholarship, such analytical rigour, such a sense of the foundations of the social theory of this century, it has become a cliché to praise Elster's method of analysis and his specific analysis of the less, this seems to be the lesson learned from Elster's reconstruction. The model of society which mobilizes individuals mobilizing around perceived interests still holds the key to our understanding of social change. These interests, however, have a wider provenance than the Marxist theory of capitalist exploitation alone.

Peter Abell is professor of sociology at the University of Surrey.

Joining the dance

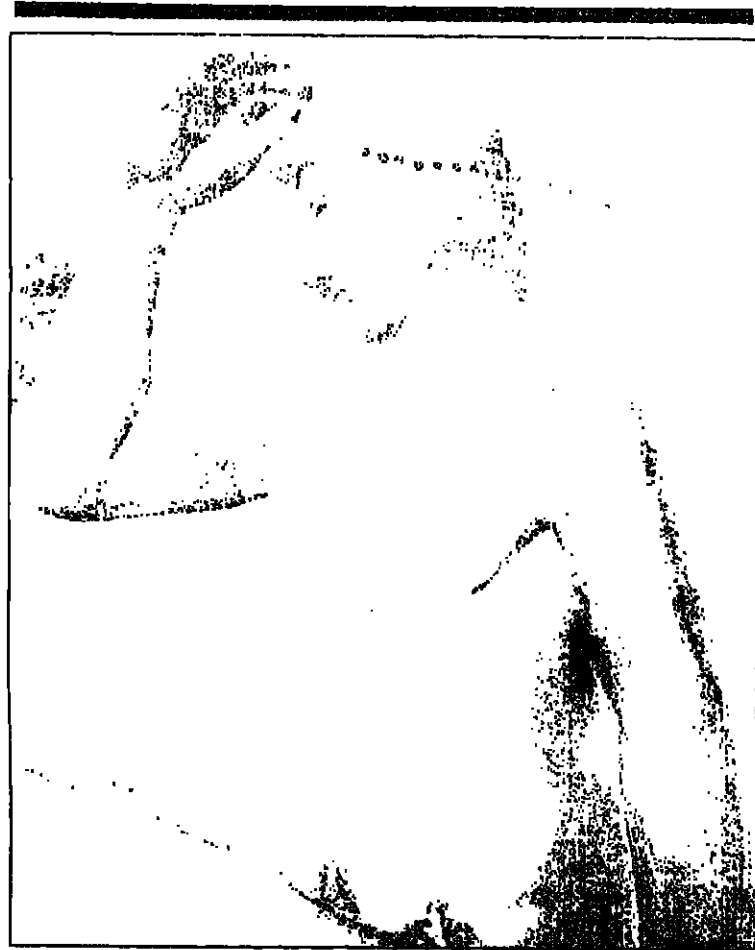
The Greek Theater
by Leo Aylen
Associated University Presses, £35.50
ISBN 0 8386 3184 3

How many dancers can read Sophocles in the original? How many classical scholars can dance? Sophocles was a dancer and a master-choreographer, and the kind of drama that he composed depended on a union of words, music and dance such as it is almost impossible for a modern reader to re-imagine from the more or less inert marks on a page.

Leo Aylen's book mounts an audacious assault on this supposed impossibility. He is unusually equipped for this task in that he combines practising expertise in the theatre and other contemporary media with an academic training in classics. He can tease meanings out of the Greek text for himself, and he can draw on the work of recent classical scholarship to argue in detail his case for the intimate correspondence between words and their embodiment in the metres and dances of the Greek chorus. Our appreciation of Greek tragedy still suffers, he believes, from the malignant residue of neoclassical notions about tragedy's necessary solemnity and intellectuality. At the heart of Greek theatre was dance, the physical expression of worship, the spirit of riotous, carnival ecstasy presided over by the lord of life and death, Dionysus.

This is all thoroughly Nietzschean, and Aylen candidly avows his belief in the need of the modern theatre (and the modern world) for Dionysus, or to use Lorea's word, *duende*. This can inspire him to a rapturous prostration before the example of 5th-century Athens which he claims had a culture based on the worship of Dionysus and which "stands perhaps for all time as the model of a society". This strain of dangerously wishful thinking blurs much of the general argument of the book, bludgeoning the reader towards accepting a distinctly mystic view of what constitutes "Greek culture". It is indeed possible to believe that Aylen too loosely calls the "erotic" did indeed play a large part in Greek culture without believing Aylen's breath-taking claim that the culture "centred" on it.

But if one allows for some irritating innocence and accepts the element of bold speculation, there are two aspects of his book which command attention. One is Aylen's general, polemical emphasis on the sheer uninhibitedness of 5th-century Athenian drama, on the cultural and imaginative affinities between Aristophanes and his supposedly more solemn tragic colleagues. Sophocles breathed the same air as Aristophanes, not the same air as Aristotle. Aylen reads the tragedians



A relief from a sanctuary to Athena at Sounion, around 485-80 BC, a picture from *The Art and Culture of Early Greece 1100-480 BC* by Jeremy M. Hurwitt (Cornell University Press, \$54.45).

from an Aristophanic perspective, as it were, reliving in their riotous colour and verve, their total instabilities and unpredictable rhythms, their hospitality to the grotesque and burlesque humour. Their heart, he argues, is in the choral dances, and he strains to conjure up how exactly these dances may have looked and sounded and felt.

This too commands attention, because while many literary critics (more than Aylen seems to allow) have handsomely acknowledged the "erotic" of the choral lyrics through detailed analysis of their densely evocative images and elusive syntax, no one has tried systematically to imagine how these words were given body and motion in the choral dances. Aylen's book is a bold attempt to do this. He provides a series of these lyrics provide an exact choreographic code, "as detailed and precise as Shakespeare's built-in instructions to actors as to how to speak his blank verse". And he proceeds to demonstrate this argument, through closely argued accounts of both climactic moments in a number of different plays, and of whole plays in the case of *Proterea Bound*, *Antigone* and *The Frogs*. Here, as often throughout the book, he is at his most daringly imaginative and persuasive with Aristophanes.

There are numerous theoretical objections to his argument about the necessary congruence between words and music and dance, some of them

suggested by the analogy he makes with Shakespeare. He appeals too blithely to the perilous notion of the *Gesamtkunstwerk*, and to other insufficiently scrutinized notions of the "rightness" of the relations between the parts of an artistic whole. One may feel that recent literary criticism has done more than Aylen allows towards the imaginative recreation of these great plays. And it is odd to find, amid all the emphasis on dance, no mention of Marlin Graham, who seems to have shared many of Aylen's beliefs and has tried to put them into practice, as Norman Austin argued in a very suggestive article in *Ariston* in 1975.

It is idealistic to believe that Aylen's book marks the beginning of a new tradition of collaboration between scholarship and the theatre, which will do for the Greeks what has already been done for Shakespeare. But it would be good to see his ideas given free rein, to see how they worked out in performance. This book has many virtues as well as some vices and irritations. It represents the pugnacious, enthusiastic, ingenious efforts of a well-informed and well-meaning imagination to give body and substance to the spirit of Greek theatre.

Adrian Poole

Adrian Poole is a fellow of Trinity College, Cambridge.

Table talk

W. H. Auden: the fur interior
edited by Alan Bold
Vision Press, £15.95
ISBN 0 85478 056 4
W. H. Auden
by Stan Smith
Blackwell, £12.50 and £3.95
ISBN 0 631 13881 X and 13515 4

Stan Smith sets out to re-read Auden in the light of recent critical theories. Alan Bold's collection of essays is typical of the older tradition against which Stan Smith is reacting. Liberal, eclectic, as variable in quality as in outlook, the contributions to Bold's "symposium" remind one of the origins of that word, a drinking party, or an account of the conversation at such a party. Evidently Bold set out to invite a thoroughly heterogeneous set of guests in the firm liberal belief that if not in virtue then *in vino veritas*.

The conversation ranges from the intelligent and closely argued to the circumstantial and downright opinionated. As an example of the latter Charles Osborne's answer to the question, "Was Auden a Christian?" must represent a bad joke that hopefully fell flat: we are all Christians, he asserts, unless we opt out, when "we have to label ourselves as agnostics or atheists or take up one of the crunker religions, or pretend to be Muslims or whatever". All the contributions to part two are circumstantial - a reminiscence of Auden at Michigan, Auden's one-dimensional view of opera, and rambles through Auden's plays and prose. In part one, though, there is a brilliant dinner-stopping disquisition on Auden's uses and abuses of fairy-tale mythology by Jan Montefiore.

At least two of the guests, Walter Perrie and William Logan, reinforce the traditional division between early and late Auden. The former argues that Auden abandoned his earlier belief in the world's potential perfectibility for an acceptance of its imperfection, while the latter claims to show how the left emotion of Auden's earlier linguistic effects gives way to the unleft prejudice of his later poetry. As for nine host, he must have been influenced, by the general spirit of bonhomie when claiming that Auden is "the great modern poet of friendship".

Stan Smith I suspect would not have

been a welcome guest at this particular dinner table. "Grub First, Then Ethics", he might have demanded, quoting Auden's poem of that title, itself a quote from Brecht. Smith uses the tools of Marxist criticism and deconstruction and repeatedly shows how Auden's intellectual relativism, like his macaronic style, "points to the artifice of language, reminds us of what is left out, left over, in every utterance."

How well does the criticism which applies recent critical theory work in practice? As I would have suspected, it is of most use when taking the wider view of a writer's output. Stan Smith's opening chapter on "Auden and Ideology" is the most illuminating and original part of the book because he allows himself to range over the whole spread of Auden's writings. Starting with the assumption that Auden is himself a text, he then looks at the ways in which this textual subject and his literary texts both constitute an ideological nexus related to the discourses of the society which helped form them. By skilful quotation Smith convinces us that Auden the unitary subject is illusory. "In Memory of W. B. Yeats" mourns not so much Yeats as discourse itself, while "September 1, 1939" reveals "the irreducible plurality of the discourses it strives to live into a single self-possessing voice." Although never and Derrida combine to defeat the illusion of unitary power whether political or linguistic.

The detailed application of this theoretical stance is also fascinating because it elicits new insights into the texts selected for comment. The later poetry might not be primarily concerned with discourses of power and resistance, as this book suggests, but these concerns are certainly present in it and have not been properly attended to in the past. Yet much of the book belongs to the older formalist tradition of criticism with detailed exegesis and numerous quotations. So that the overall effect is of over-condensed explication which concentrates in traditional Marxist style on ideological content at the expense of linguistic effect. Auden is wittier and wider in his range of interests than his book makes out. But that is not an indictment of the new perspective, merely a reservation about a particular application of old and new which has some genuinely different things to say about a much written about poet of our time.

Brian Finney

Brian Finney is senior lecturer in literature at the University of London Extra-Mural Department.

Retreat from Lenin

Marxism in the USSR: a critical survey of current Soviet thought
by James P. Scanlan
Cornell University Press, \$35.00
ISBN 0 8014 1649 3

Soviet philosophers inherited from Engels and Lenin a mixed bag of philosophical concepts which have never been adequately sorted out. For the most part Engels and Lenin are traditional materialists who believe in the primacy of matter over mind in the formation of our experience. Lenin even advanced the uncompelling view that two camps: either the reactionary idealist camp, or the progressive materialist camp. That this crude division overlooked Marx's insistence that idealism had contributed an important active side to the development of our thinking seemed not to trouble Lenin. Apart from his later marginal notes on Hegel's philosophy most of Lenin's utterances on philosophy reinforced Marx's "dialectical" materialism.

Scanlan expertly tells the story of

how contemporary Soviet philosophers are struggling with this confused inheritance. As he points out, despite the difficulties of interpretation, "Soviet Marxists have continued to philosophize in the grand manner, advancing a general theory of reality in all its guises, from subatomic particles to international politics". Although deriving their stock in trade from Engels and Lenin contemporary Soviet philosophers are none the less able to innovate and engender controversy in their inquiries: indeed, Scanlan's important thesis is that Soviet philosophers far from deriving their complete credo from Marxism-Leninism employ the vocabulary of the doctrine to extend continuously their philosophical boundaries.

However, the price that Marxism-Leninism pays for being employed in this way is, in Scanlan's view, that its fundamental tenets - adhered to by most Soviet scholars - become increasingly more vacuous. At one time, for instance, Soviet Marxists took a rigid view of the primacy of productive forces in the development of society. Nowadays, however, leading Soviet scholars take a more interactionist view of the relationship between what Marx called the economic base and ideological superstructure of society. According to this view of historical materialism there are circumstances in which elements in the ideological superstructure of society may play a leading role. However welcome this shift in orthodox thinking may appear,

Scanlan believes that the "interactionist" perspective softens down the original thesis that there is nothing distinctively Marxist which remains.

The story of materialism within Soviet Marxism is somewhat dramatic. It is a story of retreat from the dogmatic Leninist position that matter is primary both epistemologically and metaphysically. This has been replaced by the more flexible and incoherently more interesting view that our knowledge is formed both by our relationship to the external world and our intentions with respect to it. Contemporary Soviet materialism is correspondingly diverse, dynamic and often contradictory. Scanlan shows how scientists develop their own interactionist brand of materialism to deal with the problems of their disciplines (greatly augmented by Einstein's theory of relativity) and philosophers conceal their own deal with the unresolved problems of metaphysics. The contrast between Engels' original dogmatic defence of a "matter in motion" style of materialism and the current open-endedness of Soviet materialism could not be more marked.

At the heart of Scanlan's work is a rigorous discussion of Marxian dialectic. Here Scanlan makes in his own right an important contribution to contemporary philosophy. There is no accepted orthodoxy on the issue of dialectic in Soviet philosophy. This reflects the incomplete nature of Marx and Engels's deliberations on the

topic. Under no circumstances can Marx's elliptical comments on dialectic in *Capital* be supplemented by Engels's weighty but often misguided pronouncements on the topic of his later works. The issue turns on the question of the ontological status of dialectics. Soviet philosophers have perceptively seen that this is the case and have, on the whole, cast doubts upon Engels's and Lenin's view that dialectics can be imputed to things and that reality is thoroughly dialectical. Although still favoured by some Soviet philosophers there are intractable problems with such an approach, not the least of which is its nonsensical flouting of the most basic rules of formal logic.

Scanlan suggests that there is a growing division within Soviet philosophy between the antimaterialists and the polarists. The antimaterialists believe that contradictions occur naturally whereas the polarists believe (more plausibly) that contradictions occur only in our knowledge of the world. This division pinpoints an important issue for those who want to argue with Marx that the depiction of contradictions plays an important role in the development of our knowledge and in the unfolding of history. If sense is to be made of such a way that it does not run foul of Aristotle's law of identity. Nothing can be the opposite of itself. The antimaterialists, following Engels and Lenin, appear to suggest this. The polarists more cautious approach is infinitely

more promising. In being prepared to accept the distinction between a logical contradiction and a real contradiction and through their rejection of Lenin's theory of reflection they suggest the path might be found for dialectics to be made compatible with formal logic. It is through contraries rather than wholesale opposites that dialectical debate advances.

Scanlan's book is a delight to read and is without rival in its field. Its chapters on Soviet moral philosophy, political philosophy, philosophy of history and aesthetics also demonstrate the steady retreat that has taken place from the dogmatic positions of a Stalinist era. Scanlan leaves us with the impression that Soviet philosophy, lively, in some instances critical and one or two areas, such as systems theory, semiotics and aesthetics at the forefront of its field. Soviet philosophers nowadays make wide use of the writings of the young Marx, as well as the latest and most highly regarded works in western philosophy. They do not openly able to avow such eclectic bourgeois scholarship. Soviet philosophers are able, as with their colleagues, to exploit the best of western scholarship to advance their own "progressive" inquiries.

Howard Williams

Howard Williams is lecturer in political theory at University College, Aberystwyth.

Merry Greeks

The New Comedy of Greece and Rome
by R. L. Hunter
Cambridge University Press, £22.50
and £7.95
ISBN 0 521 30364 8 and 31652 9

Over the past few decades our knowledge of the Greek new comedy of Menander has spectacularly advanced: large parts of no fewer than six plays have now seen the light besides the discovery of the *Dyskolos* in its entirety. The result has been to undermine standard accounts not only of later Greek comedy, but of the Roman adaptations of it by Plautus and Terence, now that a much less conjectural picture of Menander's own practice is possible.

Hunter has undertaken a brief survey of new perspectives currently available for new comedy as a whole. He has been able to take an opportunity denied to *The New Cambridge History of Classical Literature*, which is obliged by its plan to spread the material less comfortably between its two separate Greek and Latin

volumes. Hunter has excused his newly-integrated design with elegant economy: inevitable chapters on form and on plot and motif are supplemented by treatments of themes and conflicts, comedy and tragedy, and didacticism. The same degree of sobriety is in evidence throughout, and Hunter suspends judgement on numerous occasions, especially where it is tempting to prejudice the context of extensive fragments. He is also able to compromise between traditional philological topics and dramatic considerations: classicists will be relieved to see problems of *contaminatio*, the blending of different sources, reduced to a paragraph, and the notorious problem of Plautus' name to a sentence; while drama students will be enlightened to find traditional conventions such as the running slave (*servus currens*) carefully explained in terms of what an experienced audience is preconditioned to expect.

But traditional literary history is not neglected; Hunter is especially strong on the continuity from earlier comedy with a particularly apt comparison of Plautus' schooling to that of Strep-siades; and on the elusive relationships with tragedy, in which he wisely refuses to press a tragic heroine as the model for Alcmena in the *Amphitruo*, or speculate too precisely on the

tragic inspiration of the *Epileptones*. Hunter is consistently sensitive to metrical contrasts and linguistic levels, though perhaps the latter is sometimes pressed a little too far: it does not take a very gifted dramatist to represent a daughter as more gushful the moment she recognizes her father, a nuance still less perceptible in Hunter's necessarily banal translations.

I had only one strong regret (rather than reservation): that Hunter did not use his extensive knowledge of Greek novelists and literary letter-writers to add yet another new perspective on new comedy. The imitations of comedy in narrative prose, so fashionable in the early empire, show us what happens to the form when its dramatic lifeblood is drained off: they can only add to our appreciation of how far the comic-dramatists' success depends ultimately on their sense of theatre. But overall this is a well-reflected and sober treatment, and Hunter has established a capacity to present scholarly material sympathetically to every level of reader.

Graham Anderson

Dr Anderson is senior lecturer in classical studies at the University of Kent.

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BOOKS

Building a stairway to paradise

The Cosmological Distance-Ladder: distance and time in the universe by Michael Rowan-Robinson
Freeman, £19.95
ISBN 0 7167 1586 4

In the 1920s the American astronomer Edwin Hubble, made two astounding discoveries. First, he established beyond doubt that certain nebulae, such as the great Andromeda spiral, are external systems comparable to our own Milky Way. Second, he discovered the expansion of the universe by noting that more distant galaxies are receding by ever increasing amounts. The rate of expansion is indicated by a constant, Hubble's constant, which not only determines by how much recession velocities increase with distance but, by implication, also fixes the age of the universe and its size at any time.

One of the most precious goals in observational cosmology is to measure Hubble's constant - by comparing the recession velocities inferred spectroscopically for galaxies whose distances can be determined independently. Measuring astronomical distances is not a trivial matter, as galaxies and stars cover a wide range of physical properties. Clearly, we must choose a restricted type of object whose properties are standard - for example, in size or luminosity.

Rival teams of observers regularly pitch battle as to the merits of their own methods for determining Hubble's constant, pointing out the pitfalls in those of their opponents. The fact remains, however, that the present uncertainty in Hubble's constant covers a factor of two. Research here will undoubtedly benefit significantly when the space telescope is launched in 1986. The space telescope avoids the atmospheric blur that plagues ground-based observatories and thus has a distinct advantage in resolving individual stars in distant galaxies. In fact, the National Aeronautics and Space Administration has optimistically named the facility Hubble Space Telescope in anticipation of a quick reliable answer to this golden question of cosmology.

Against this backdrop of excitement, Michael Rowan-Robinson has produced an interesting new approach to defining man's view of the cosmos. Distances to stars and galaxies form part of a long step-ladder to Hubble's constant. In discussing the methods involved and in attempting to reconcile different claims, the reader learns a lot of astrophysics. Why not combine the basic techniques and theory within the context of one of man's most challenging scientific programmes?

The technique is an admirable one.



The Egyptian pharaoh Akhenaten (who ruled from 1379-1362 BC) may be the oldest known case of acromegaly, a syndrome in which excess secretion of growth hormone leads to overgrowth of soft tissues, bone and cartilage. This stone relief of the pharaoh is illustrated in Lawrence Crapo's *Hormones: the messengers of life* (Freeman, £19.95 and £11.95).

The book is well founded in associated areas. There is a reasonable introductory chapter on historical aspects and physical principles, followed by three sizeable chapters on distance measurements over increasing scales. A brief chapter on cosmological models discusses the nature of the expansion in terms of a hot "big bang" origin of the universe; and a final chapter summarizes the controversy on Hubble's constant. The book also touches briefly on the question of whether the universe will eventually stop expanding and contract to a fate known as the "big crunch". Many areas of cosmology, however, are left out altogether, and this will limit the book's use as a general text.

As a reference source, the book will be highly valued. The detail provided is impressive, with tables comparing distance determinations, appendices covering basic astronomical data and the theory of errors, and copious lists of references to original articles. Although the author has canvassed opinions far and wide, he retains a refreshing independence. However, he cannot resist developing arguments for his own value of Hubble's constant which, not surprisingly, lies midway between the extremes claimed in the literature. The moral seems to be that

the precise value depends crucially on the statistical techniques used to analyse the data, a point that is demonstrated more clearly in the book than in the many review articles the subject has attracted. It will be interesting to see how the next test of time when the space telescope results are published.

Though aimed at undergraduates in their final year, the tables and references will be of particular use to researchers, teachers and graduate students. The disadvantage of this approach to teaching cosmology, however, is that the same physical principles and techniques are often required at several stages in discussing the distance ladder, so that the inexperienced reader will be at a loss as to how to find such material in a hurry without sinking into the mass of unwanted details. The book will therefore be of most value to those with some background in astronomy. It represents a large investment of effort by the author on a topic likely to be of intense interest in the coming years.

Richard Ellis

Richard Ellis is professor of astronomy at the University of Durham.

Polymer stability

Polymer Degradation and Stabilisation by Norman Grassie and Gerald Scott
Cambridge University Press, £27.50
ISBN 0 521 24961 9

As the main, sometimes only, constituent of plastics and man-made fibres are synthetic polymers, a book concerned with the degradation and stabilization of polymers is of direct interest to a wide range of chemists. Indeed, plastics, rubbers and fibres are now used under a wide variety of conditions; and a primary objective of a large number of industrial research and development groups is to extend the operational life-time of objects made from polymers and to develop materials for use in hostile environments. Conversely, there is a need for plastics which, when the user has disposed of them after use, degrade rapidly under outdoor conditions, thereby reducing pollution.

Weathering, the combined action of sunlight and air, is one of the main causes of the failure of plastics to maintain specified performance. Indeed, it is only recently that plastic rhombic pipes and plastic glazing were considered sufficiently reliable to be used in the house-construction industry; and it is not so very long ago that discoloration and deterioration of curtains made of synthetic fibres caused many people to return to such natural materials as cotton.

Clearly, then, understanding and controlling polymer degradation processes has significant economic importance. Moreover, understanding their nature makes it possible to develop a strategy for stabilization. Professors Grassie and Scott have interna-

tional reputations in research into these complementary areas - Grassie specializing in degradation (mainly thermal) and Scott in stabilization (mainly photo-oxidative). Their book thus offers a comprehensive, though brief, survey of the two fields.

As an enormous amount of literature has been published on polymer degradation, the authors have rightly chosen to summarize the mechanisms involved rather than provide a detailed analysis of complex and frequently inadequate quantitative studies. As a result, they have produced an excellent starting point for undergraduates or industrial chemists new to the stimulating area of polymer science. Part one presents basic mechanisms, descriptions of thermal and photo-oxidative degradation and outlines the experimental techniques (with references to more detailed descriptions). The treatment of antioxidants and stabilizers forms the long chapter in the book, but here the authors gloss over some current controversies. Once again, however, adequate references are given to specialist reviews. The final part of the book discusses a number of specific examples of polymer degradation, such as flammability, and mechanical and high-energy radiation damage.

Although on a number of occasions I felt that more detail could have been given on some topics, the authors have managed to condense a very difficult area of polymer science into a readable and accessible textbook. By concentrating on mechanism and totally avoiding the kinetics of degradation reactions, they have reduced the subject to a form in which undergraduates should actually enjoy studying it.

J. R. McCallum

J. R. McCallum is reader in chemistry at the University of St Andrews.

Seaweed ecology

The Ecology of Seaweeds by C. S. Lobban, F. J. Harrison and M. J. Dunstan
Cambridge University Press, £30.00
ISBN 0 521 26508 8

Based on a course of lectures to final-year undergraduates, this well-written, accurate and elegantly-presented book explores the effects of environmental factors on the growth and metabolism of seaweeds. The exploration of physiological ecology is made via light and photosynthesis, temperature, salinity, water motion (especially commensal), nutrients, and carbon metabolism.

However, certain fundamental processes with which I would have expected students to have been acquainted before tackling this more specialized field, are described in great detail - for example, electron transport in photosystems I and II, photophosphorylation, and the Calvin and Krebs cycles. Some judicious editing

(including the removal of some very large figures) might have allowed room for more information on the physiological approaches to seaweed harvesting and conservation. Similarly, the coverage of mariculture in the last chapter is also restricted.

Other chapters cover the phanerogams and are up to date and, in this instance, more wide-ranging than the title might suggest. The very nature of the topics under discussion, the species involved are limited in number and worldwide in their distribution, the inevitable result being that students will on occasions associate a particular effect with a species far removed from their experience. But this may simply be an indication of the limited amount of research on physiological ecology compared with, for example, community ecology.

Although there has been no shortage of books on algae in recent years, I can recommend this one with confidence, as it offers expositions of topics not covered in similar books.

A. D. Boney

A. D. Boney is professor of botany at the University of Glasgow.

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In reply please quote Ref. No. 56437. (518179) R1

Inside devices

Microtechnology: the M6809 by F. J. Thewlis
Blackwell Scientific, £8.95
ISBN 0 632 01315 X

Introduction to Microcomputer Engineering by D. A. Fraser, R. Gregory, R. Hawken, B. Holdsworth, G. Jones and M. Ryal
Ellis Horwood, £30.00 and £12.50
ISBN 0 85312 436 1 and 888 X

Since the introduction of the first microprocessor by Intel (the four-bit 4004) in 1971, several hundred devices have been launched. Each is a complete system on a chip and each is very much the baby of a small group of designers. Indeed, about the only principle uniting these proprietary creations is the Von Neumann computer architecture, which uses a central processor sequentially fetching and executing instructions from a common memory, holding both program and data code.

From this point the cornucopia of microprocessors follow their own idiosyncratic paths. But where does that leave the writer of textbooks in this area? The obvious choice is to introduce - a hypothetical Von Neumann structure and develop the book around this theme, perhaps ending with a real device. However, although this approach was fairly popular in the early days, especially when few had got to grips with proprietary devices, it was of limited use to those actually intending to use the beasts; and for years such individuals were left to rummage through manufacturers' data sheets and application notes.

With this in mind, two camps of writer have emerged. One concentrates on one or two commercial microprocessors: they either use the remainder of the space to expound on all the "bells and whistles" exhibited by the chosen few or to describe design techniques which use these particular types of device. The other camp spread their net more widely, but at the expense of each one. But as that range is very wide, in many cases a specialized area is chosen - such as assembly programming for one microprocessor. Thewlis's book can be placed in the first camp, as he uses the

6809 microprocessor as his chosen vehicle to impart knowledge - although he does make some attempt at comparing it with other mainstream devices. The 6809 is arguably the best eight-bit microprocessor, possessing a clean logical architecture with a minimum of foibles.

Thewlis's book assumes a basic knowledge of computer architecture and logic. Given this lowly foundation, however, the use of a state-of-the-art device requires considerable space to elucidate the complexity of such a microprocessor; but the 156 pages of text available often fails to achieve this. Indeed, within this modest space, the author covers bus structures, machine and assembly-level programming, monitors, memory systems, input/output, and real-time applications (timing and analogue-digital conversion). An example of the thinness of the text in places is that section 1.4 (microprocessor bus connections) and section 1.5 (power supplies) together take up rather less than a page - including a diagram. Some topics, such as the use of high-level languages, have been completely omitted. On the credit side, however, Thewlis has used real devices, such as Ferranti data conversion chips and Hitachi memories, as illustrative material; and the choice of the 6809 as the central device

is a useful addition to the non-proprietary literature specializing in this popular microprocessor.

This book should be useful in computer and physical science degree or diploma courses in which a real microprocessor is used as an example of an implementation of the Von Neumann principle, where the briefness of many of the topics would not necessarily be a bad thing. Engineering degree courses, however, require more comprehensive exposition than Thewlis's book provides. Despite this, I am recommending it to my final-year BSc students as background reading for a 6809-oriented project, based on a previously detailed knowledge of the progenitor 6800 microprocessor.

The second book, representing the alternative approach, surveys a representative range of microprocessors. It assumes a background knowledge of digital systems and some exposure to at least one type of microprocessor. Its stated objective is the design of a microcomputer based on microprocessors embedded into a piece of equipment and running a single program for the whole of its working life. The coverage is indeed encyclopaedic. After the obligatory introduction to number systems, and so on, the following four chapters cover the

popular 8085, 8086 and 8088 microprocessors.

A strong feature here is the use of computer software examples as a primitive benchmark. Chapter six then features miscellaneous devices: 16-bit microprocessors, single-chip microcomputers, analogue and digital signal processors, and the Immos transputer, leaving only 79 pages for a chapter on system-related topics - such as interrupts, direct memory access, memory manipulation, digital theory, video graphics, systems testing. This wide range, however, is the book's main weakness - the lack of space to do all the author justice.

This book would be most useful to science and computer-based degree or diploma courses in which a wide-ranging review is required. But for electronic engineering degree courses it would have to be supplemented with more specialized texts.

S. J. Cahill

S. J. Cahill is senior lecturer in the Department of electrical and electronic engineering at the University of Ulster at Jordanstown, and author of "Designing Microprocessor-Based Systems" (Penguin, 1985).

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UNIVERSITY OF STIRLING

Department of Computing Science

PROFESSOR TWO LECTURERS

The University seeks applications for a new Chair in Computing Science from candidates with an established research record in any area of the discipline, including microelectronics. In addition applicants are sought for two new lectureships.

The successful candidates will join a department with an already established reputation for research in software engineering and with substantial new funding for growth in this and other areas of the discipline.

For further particulars please write to Mr R.G. Bomont, University Secretary, University of Stirling, Stirling FK9 4LA to whom applications should be sent to arrive not later than 21st February, 1986. (74164)



University of Exeter

Applications are invited for the post of **LECTURER IN INFORMATION TECHNOLOGY**

in the Department of Extra Mural Studies (formerly to be re-constituted as the Department of Continuing and Adult Education). The post is available from 1 October 1986 or sooner if possible.

The successful applicant will be responsible for the development of University Continuing and Adult Education courses in Information Technology throughout Devon, Cornwall and the Isles of Scilly.

Commencing salary will be within the range £7,580 - £11,672 annum on the scale £7,580 - £14,950 per annum (under review) with placement dependent on age and experience.

Further particulars available from the Personnel Office, University of Exeter, Exeter EX4 4JF to whom applications (6 copies, candidates reading overseas only) giving the names of three referees, should be sent by 1 February 1986 quoting reference No. 3431. (74164)

Polytechnics continued



HONG KONG POLYTECHNIC

The Hong Kong Polytechnic is a large and dynamic institution of higher education offering courses in a wide variety of subjects up to degree level. The infrastructure (under active review) currently consists of 4 academic Divisions containing 20 teaching departments/units, as well as two interdisciplinary institutes. The Polytechnic invites applications for the following posts (vacancies from September 1986):

DEPARTMENT OF APPLIED SCIENCE

Senior Lecturer/Lecturer in Analytical Chemistry/Surface Technology/Polymer Chemistry
Lecturers in Biochemistry and Physiology specialising in one or more of the following areas: Molecular Genetics, Plant Physiology and Human (Exercise) Physiology

DEPARTMENT OF ACCOUNTANCY

Principal Lecturer in Management Accountancy

DEPARTMENT OF BUSINESS & MANAGEMENT STUDIES

Principal Lecturer in Marketing
Senior Lecturer/Lecturer in Economics with Econometrics or Managerial Economics
Senior Lecturer/Lecturer in Management with Behavioural Studies or Personnel Management

DEPARTMENT OF COMPUTING STUDIES

Principal Lecturer in Computer Systems & Networking/Computer Graphics, CAD/CAM and Information Technology Application/Computer Aided Learning
Senior Lecturer/Lecturer in Computer Simulation/Information Technology

DEPARTMENT OF ELECTRICAL ENGINEERING

Principal Lecturer/Senior Lecturer with extensive research experience in Electrical Engineering and teaching experience at honours degree level
Senior Lecturer in Measurement

DEPARTMENT OF ELECTRONIC ENGINEERING

Principal Lecturer/Senior Lecturer in one or more of the following areas: Computer Systems, Data Communication and Computer Networking, Integrated Circuit Design and Fabrication

DEPARTMENT OF INSTITUTIONAL MANAGEMENT AND CATERING STUDIES

Principal Lecturer/Lecturer in Hospitality Management/Applied Supervisory Studies/Applied Human Resource Development
Senior Lecturer/Lecturer in Accommodation Management/Housekeeping/Facility Planning
Senior Lecturer/Lecturer in Food & Beverage Management/Food Preparation Operations/Food Service Operations
Lecturer in Computer Applications/Management Accounting/Accounting/General Management
Lecturer in Applied Marketing
Lecturer in Sales Training Studies/Applied Business Communications

DEPARTMENT OF MATHEMATICAL STUDIES

Principal Lecturer/Lecturer in Applied Mathematics/Statistics/Operations Research

DEPARTMENT OF MECHANICAL & MARINE ENGINEERING

Principal Lecturer in Materials/Dynamics/Strength of Materials

DEPARTMENT OF PRODUCTION & INDUSTRIAL ENGINEERING

Senior Lecturer/Lecturer in Design for Manufacture/Microprocessor Application/Manufacturing Management

CENTRE OF LAND & ENGINEERING SURVEYING

Principal Lecturer/Senior Lecturer/Lecturer in Geodesy, Engineering Surveying, Hydrographic Survey, Land Information Systems, and Automated Field Data Acquisition and Mapping

INSTITUTE OF MEDICAL & HEALTH CARE

Principal Lecturer/Senior Lecturer/Lecturers in Medical Laboratory Science/Occupational Therapy
Senior Lecturer/Lecturers in Diagnostic Radiography, Nursing, Optometry, Physiotherapy and Clinical Psychology

INSTITUTE OF TEXTILES & CLOTHING

Principal Lecturer/Senior Lecturer/Lecturers in Clothing Technology, Clothing Production, Fashion Design and Pattern Construction
Senior Lecturer/Lecturer in Apparel Merchandising/Marketing
Qualifications for Appointment and Salaries (£) — HK\$11.27 on 7.1.86

Principal Lecturer: HK\$247,820 — HK\$307,280 p.a. Candidates should have (a) a good honours degree or professional qualification and an advanced specialist qualification or extensive experience in a specialised field; (b) substantial professional experience; and (c) proven administrative ability.

Senior Lecturer: HK\$208,820 — HK\$270,720 p.a. Candidates should have (a) a good honours degree or professional qualification and preferably an advanced specialist qualification; and (b) substantial professional experience; and (c) proven administrative ability.

Lecturer: HK\$112,740 — HK\$189,880 p.a. Candidates should have (a) a good honours degree or equivalent professional qualification and (b) at least three years' professional experience.

Conditions of Service: Appointment on 2-year contract initially. Continuation thereafter is subject to mutual agreement. Benefits include a terminal gratuity of 25% of basic salary received over entire contract period, leave, subsidised accommodation for overseas appointees and local appointees on a salary of HK\$171,960 p.a. or above, medical and dental benefits and children's educational allowances.

Further information and application forms obtainable from the Association of Commonwealth Universities (Acup), John Foster House, 36 Gordon Square, London WC1H 0PF. Completed application forms should be returned by 28 February 1986, with 1st copy direct to the General Secretary, Hong Kong Polytechnic, Hung Hom, Kowloon, Hong Kong; and the 2nd copy to the Association of Commonwealth Universities.



PCL is a broadly based institution at the forefront of academic & professional education, research and continuing education. Applications are invited for the following vacancies:-

Suitably qualified candidates will be awarded the title Professor.

HEAD OF SCHOOL OF BIOTECHNOLOGY

PCL has established a national and international reputation for its training (teaching & research) in biotechnology. The School offers courses at both undergraduate and postgraduate level and supervision is provided for M.Phil and Ph.D. degrees. PCL plays a pivotal role in cooperative ventures in higher education, notably with University College London and the University of Kent at Canterbury in the Institute of Biotechnological Studies as well as with other London polytechnics in the London Centre of Biotechnology. Applications are invited from distinguished and well-qualified scientists, able to offer leadership, vision, as well as having a proven track record in biotechnology.

HEAD OF SCHOOL OF MECHANICAL & COMPUTER-AIDED ENGINEERING

The School is a recognised centre for computer-aided manufacturing with an active research programme. The Head is required to develop undergraduate teaching and lead the School in the design and implementation of relevant case studies and project work. Candidates should have an academic and/or industrial background with specialisation in one of the following areas: computer-aided design, computer-aided engineering, manufacturing systems.

HEAD OF SCHOOL OF ESTATE MANAGEMENT

The Faculty of the Environment is a centre for advanced education for the construction industry and associated professions. Applicants should be well-qualified, with experience in either higher education or in a professional capacity. In addition, candidates should have the understanding of ability to lead and develop the School's educational programme and to enhance the scholarly context in which undergraduate and postgraduate teaching can flourish.

HEAD OF SCHOOL OF ACADEMIC LEGAL STUDIES

The PCL Faculty of Law is one of the largest Polytechnic Law Faculties in the United Kingdom. It offers a wide variety of full and part-time courses including Access, Degree and postgraduate and Legal Executives (Fellowships), also an expanding short course programme. Candidates for both posts should be well-qualified — an appropriate professional qualification being normally expected of those applying for the School of Professional Legal Studies.

Further details are available from the Personnel Officer, PCL, 309 Regent Street, London W1R 8AL, to whom applications should be made in writing with a full curriculum vitae.

Closing date: 12 February 1986.

Salary Scale: £18,284 — £20,168 inclusive.

PCL IS AN EQUAL OPPORTUNITIES EMPLOYER

The Polytechnic of Central London

PORTSMOUTH

FACULTY OF BUSINESS, ECONOMICS, EDUCATION AND MANAGEMENT.

READER IN BUSINESS/MANAGEMENT Ref: 127a

Applications are invited from suitably qualified candidates with a demonstrable record of research and consultancy in the field of applied business studies and/or management. An important requirement of the post is to initiate and lead externally funded projects and to foster research generally in the area of business and management studies. Interest would be welcome from persons regardless of their particular subject expertise, but some preference may be given to those offering experience in strategic planning and business policy.

Starting date is April 1986 but an alternative date can be negotiated.

Salary: £14,013 — £17,619.

Closing date: 7th February 1986.

Application forms and further details are available from The Personnel Office, Portsmouth Polytechnic, Nuffield Centre, St. Michaels Road, Portsmouth PO1 2ED. Telephone (0705) 825451. (71087)

POLYTECHNIC

PAISLEY COLLEGE

A Scottish Central Institution

Paisley College is a major degree awarding institution, funded by the Scottish Education Department with over 3,000 full-time students on vocationally orientated CNAAC degree and honours degree courses.

Applications are invited from suitably qualified persons to join the DEPARTMENT OF LAND ECONOMICS to assist with teaching for the BSc in Land Economics and other courses.

SENIOR LECTURER OR LECTURER IN LAND ECONOMICS

Applicants should have a social interest in economics of land use, with experience in the property world. Suitable academic and professional qualifications will be of benefit. The position is a post in the further development of an active, developing department, with good scope for research.

LECTURER TO TEACH LAW

Applicants for the post should have a special interest in aspects of law related to property and land use, and should be either lawyers, Chartered Surveyors or planners with specialist experience in legal matters.

Salary Scales:
Senior Lecturer 'A' £12,777 — £16,104
Lecturer 'A' £8,688 — £13,716 (review pending)

Application forms and further particulars are available from the Personnel Office, Paisley College of Technology, High Street, Paisley PA1 2BE (tel: 041-887 1241, ext. 230). Informal enquiries may be made of Professor A.F. Millington (ext. 285) or Mr. D. Martin (ext. 284).

Leicester Polytechnic

SCHOOL OF GRAPHIC DESIGN

Principal Lecturers

POST No. 512 COURSE LEADER BA GRAPHIC DESIGN

Applications are invited from candidates who have experience in Graphic Design and Educational Management.

POST No. 542 COURSE LEADER MA GRAPHIC DESIGN

Experienced information designer required to take charge of MA Course. This is the only masters level course in the country specialising in information design.

Salary £14,013 — £17,619 p.a.

Application forms and further details for both posts are available from the Personnel Office, Leicester Polytechnic, P.O. Box 143, Leicester LE1 9BH.

Closing date: 31st January 1986.

EQUAL OPPORTUNITIES POLICY
Applications are welcome from suitably qualified and experienced people regardless of race, ethnic origin, religion, sex, marital status or disability

LEEDS POLYTECHNIC

School of Electrical Engineering

LECTURER II

(Re-advertisement)

Applications are invited from appropriately qualified and experienced engineers to strengthen the School's teaching and research activities in

i) Communication systems and in ii) Power Electronics.

The School offers honours degree courses in Communication Engineering and Electrical Engineering, along with BTEC HND/C and specialist continuing education courses.

Salary Scales: £8,078 — £12,945.

Details from: Mrs H. Cole, Staffing Section, Leeds Polytechnic, 25 Queen Square, Leeds LS2 8AF. Tel: 0532 462355.

Closing Date: 31st January 1986. Please enclose S.A.E.

Leeds is an equal opportunity employer.

Polytechnics continued

PAISLEY COLLEGE

A Scottish Central Institution

PROFESSOR/HEAD OF DEPARTMENT OF LAND ECONOMICS

Salary £19,785 per annum (under review)

Paisley College is a major degree awarding institution funded by the Scottish Education Department with over 3,000 full-time students on vocationally orientated CNAAC degree and honours degree courses.

The above post will become vacant on 1st June, 1986 following the appointment of Professor Alan Millington to a post overseas.

The Department has a teaching staff of fourteen, offers a CNAAC degree in Land Economics and undertakes research in Land Economics and related areas. In addition to courses for continuing professional education, part-time RICS day-release courses are also offered.

Candidate should preferably have extensive academic/professional experience and the qualifications necessary to give academic and administrative leadership.

Application forms and further particulars available from the Personnel Office, Paisley College of Technology, High Street, Paisley PA1 2BE. (Tel: 041-887 1241, ext. 230)

DIRECTOR

Salary £33,006 pa incl.

The Council of Governors invites applications for the post of Director vacant from 1st May, 1986.

This post in a dynamic London Polytechnic offers a challenge to a woman or man with experience in Educational, Public Service, Industry or Commerce within the U.K. or abroad.

Additionally, as a result of external promotion of the Deputy Director, the Council of Governors is seeking the appointment of the Deputy.

Assistance can be provided with re-location expenses. Further particulars and application details are available to individual applicants, or on behalf of applicants, from Professor W.G. Overend, Chairman of the Council, c/o Head of Personnel, South Bank Polytechnic, Borough Road, London SE1 0AA, England.

Closing date for application: 21st February, 1986.

An Equal Opportunities Employer.

South Bank Polytechnic

Teaching for tomorrow in the heart of London

TEESIDE POLYTECHNIC DEPARTMENT OF CHEMICAL ENGINEERING

Applications are invited from suitably qualified and/or experienced persons for a PRINCIPAL LECTURESHIP IN CHEMICAL ENGINEERING.

PRINCIPAL LECTURER IN BIOCHEMICAL ENGINEERING

To take responsibility for the operation and further development of the biochemical engineering content of all courses run by the Department of Chemical Engineering as part of its contribution to the North Eastern Biotechnology Centre.

PRINCIPAL LECTURER IN BIOTECHNOLOGY

To lead research teams and supervise research students and develop research projects in areas of interest to the North Eastern Biotechnology Centre. The major strengths of the Centre are in fermentation, microbial physiology and downstream processing of biological products.

PRINCIPAL LECTURER IN CHEMICAL ENGINEERING

To be responsible for the development of the mainstream degree course in Chemical Engineering, taking advantage of recent initiatives within the department, such as Biotechnology.

SALARY: £14,013-£16,800 (work bar)-£17,619 per annum.

The salary on appointment will be no greater than £16,800 per annum.

Application forms and further particulars from Personnel Section, Teeside Polytechnic, Borough Road, Middlesbrough, Cleveland, Telephone (0642) 218121, Extension 4114.

Closing date for applications 21 January 1986.

An Equal Opportunity Employer.



LIVERPOOL POLYTECHNIC

Applications are invited for the following posts:-

Department of Chemistry and Biochemistry

READER £13,749-£17,289

Candidates must have a proven research record and be able to demonstrate an ability to attract external funding for research projects in a Department which is justifiably proud of its research achievements. The successful candidate will act as research co-ordinator and will be responsible for sustaining and expanding the research activities of the Department in addition to performing some teaching duties.

Closing Date: Friday 31st January, 1986

Department of Education

LII/SL - SOCIAL PSYCHOLOGY (Education Studies) £7,926-£14,763

Teaching on Primary and Secondary 8 Ed. Degrees, P.G.C.E. and in-service courses. Educational Psychology is the Education Studies area in which the teaching is focused.

Candidates should be teachers with qualifications in Educational Psychology and have a research degree.

Closing Date: Monday 27th January, 1986.

For further particulars and an application form contact the Personnel Officer, Liverpool Polytechnic, Rodney House, 70 Mount Pleasant, Liverpool L3 5UX (Tel: 051 207 3581, Ext. 2518/2519) to whom applications should be returned.

Liverpool Polytechnic is an Equal Opportunities Employer and welcomes applications from people of all races, sex, marital status or disability.

LEEDS POLYTECHNIC School of Electrical Engineering

PRINCIPAL LECTURER IN COMMUNICATION ENGINEERING

(Re-advertisement)

Applications are invited for this important post from appropriately qualified and experienced candidates. It is expected that the successful candidate will be involved in the development of a B.Eng. in Communication Engineering and play an active part in research and development.

Salary Scale: £13,749-£16,309 (bar) £17,289.

Details from: Mrs H. Cole, Staffing Section, Leeds Polytechnic, 25 Queen Square, Leeds LS2 8AF. Tel: (0532) 462355.

Closing Date: 31st January 1986. Please enclose s.a.e.

Leeds is an equal opportunity employer.

PORTSMOUTH

FACULTY OF BUSINESS, ECONOMICS, EDUCATION AND MANAGEMENT

Department of Accounting and Business Computing

LECTURER II/SENIOR LECTURER IN ORGANISATIONAL BEHAVIOUR

(Ref: 123a)

Graduate required to join a team teaching behavioural and organisational studies on several degree and diploma courses in business studies, accounting and hotel management. Applicants must have relevant postgraduate qualifications and some preference may be given to those with a subsidiary interest in industrial relations.

Salary: £8,078 — £12,945 per annum.

Closing Date: 30th January 1986.

Application forms and further particulars from Personnel Office, Nuffield Centre, St. Michaels Road, Portsmouth PO1 2ED. Telephone: 0705-825451.

(71074)

POLYTECHNIC

The Polytechnic of North London

L7 LECTURER II/SL IN ACCOUNTING

The Business School wishes to appoint a Lecturer in Accounting to contribute to the teaching of financial and management accounting at undergraduate and postgraduate levels. The successful applicant will be encouraged to develop higher areas of interest. Applications are invited from persons having the necessary qualifications at first degree or masters level. A professional accounting qualification, while welcome, is not essential.

Salary: £9,114 — £16,083 (inclusive of London Allowance).

Application forms and further details are obtainable from the Personnel Office, The Polytechnic of North London, Holloway Road, London N7 7TA. Tel: 609 9913 (24 hour answering service).

Closing date for the receipt of applications is 10 days from the appearance of this advertisement.

The Polytechnic of North London is an Equal Opportunity Employer. (61863) H3

The Polytechnic of North London

LA LECTURER II IN ECONOMICS (TWO YEAR TEMPORARY POST)

The Business School wishes to appoint a Lecturer in Economics to contribute to the teaching of micro and macro economics across a broad range of courses. The successful applicant will be encouraged to develop higher areas of interest. Applications are invited from persons having the necessary qualifications at first degree or masters level. A professional accounting qualification, while welcome, is not essential.

Salary: £9,114 — £16,083 (inclusive of London Allowance).

Application forms and further details are obtainable from the Personnel Office, The Polytechnic of North London, Holloway Road, London N7 7TA. Tel: 609 9913 (24 hour answering service).

Closing date for the receipt of applications is 10 days from the appearance of this advertisement.

The Polytechnic of North London is an Equal Opportunity Employer. (61863) H3



LIVERPOOL POLYTECHNIC

The Governing Body invites applications for the post of

RECTOR

of the Polytechnic

The Governors and the Authority are seeking a person with a record of successful management at senior level in an institution of higher education or, as appropriate, in business, industry or commerce, with particular emphasis on the management of change. Candidates will be expected to have high academic qualifications.

Salary £31,371 BURNHAM GROUP 12.

Application forms and further particulars can be obtained from the Secretary to the Governors, Liverpool Polytechnic, 70 Mount Pleasant, Liverpool, L3 5UX. Telephone 051 207 3581 Ext. 2527.

Closing date for receipt of applications 17th February 1986.

Liverpool Polytechnic is an Equal Opportunity Employer and welcomes applications irrespective of race, sex, marital status or disability.

(71081)

NORTH STAFFORDSHIRE POLYTECHNIC

POLYTECHNIC LIBRARIAN

Applications are invited for the above post following the retirement of the previous postholder. Candidates should be experienced librarians and appropriately qualified.

Salary scale: Head of Department Grade V or Grade VI £17,226-£19,128 or £18,615-£20,511

Application forms and further particulars may be obtained from the Personnel Section, North Staffordshire Polytechnic, College Road, Stoke on Trent, ST4 2DE. Tel: Stoke on Trent (0782) 45531 ext 21.

Closing date for receipt of completed applications Monday 3rd February 1986.

(71071)

LIVERPOOL POLYTECHNIC The Polytechnic Registry

ACADEMIC REGISTRAR

P.O.2 — £11,850-£12,885

Applications are invited from suitably qualified and experienced candidates for this senior administrative post. The major responsibilities will be for the efficient management of the Registry and the effective operation of CNAAC administrative procedures in the fourth largest Polytechnic.

For further particulars and an application form contact the Personnel Officer, Liverpool Polytechnic, Rodney House, 70 Mount Pleasant, Liverpool L3 5UX (Tel: 051 207 3581 ext. 2518/2519) to whom applications must be returned not later than Friday 31st January, 1986.

Liverpool Polytechnic is an Equal Opportunity Employer and welcomes applications irrespective of race, sex, marital status or disability.

(71080)

Manchester Polytechnic Faculty of Management and Business

RESEARCH ASSISTANTSHIP IN INDUSTRIAL RELATIONS

Applications are invited for a Research Assistantship for the Manchester Industrial Relations Project. The project is a major research project in the field of industrial relations in the North West of England. The project, under the direction and supervision of Dr. J. H. Willmott, will advance the understanding of industrial relations in the region. Candidates should possess a good honours degree or a post graduate qualification in industrial relations or a related social science discipline. The successful candidate will be expected to register as an M.Phil/Ph.D. student.

Candidates should possess a good honours degree or a post graduate qualification in industrial relations or a related social science discipline. The successful candidate will be expected to register as an M.Phil/Ph.D. student.

Salary: £6,954 — £13,143 (inclusive of London Allowance).

Application forms and further details are obtainable from the Personnel Office, Manchester Polytechnic, 100 Oxford Road, Manchester M13 9PL. Tel: 609 9913 (24 hour answering service).

Closing date for the receipt of applications is 21st January 1986.

The Polytechnic of North London is an Equal Opportunity Employer. (61863) H3

Colleges of Higher Education

The School wishes to appoint a full-time teacher in movement. The successful candidate will join the staff of the Stage department, which mounts an Acting course, and a Embassy Management course. The department has full use of the Embassy Theatre and Embassy Studio, and there is a variety of other accommodation. The School's other departments are devoted to the training of teachers (including advanced courses in both voice and drama), and of speech therapists, and there is joint work in drama with Westfield College.

The main duty of the post concerns the teaching of movement in the context of theatre work, and teaching experience in this area is essential. Additional experience is looked for in one or more of the following areas: historical dance, acting studies, jazz and tap. There is the possibility of appropriate work in another department, although the post is fundamentally associated with the Acting course.

The successful candidate will join an experienced team and will be expected to make a full commitment to the range of departmental activities.

Salary: Burnham L2 scale - £9,114-£13,983 Including London weighting.

Full details and application forms are obtainable from: The Principal's Secretary, Central School of Speech and Drama, Embassy Theatre, Eton Avenue, NW3 3HY.

Deadline for return of application is Monday 3 February.

EALING COLLEGE OF HIGHER EDUCATION

**SENIOR LECTURER IN
ACCOUNTING AND FINANCE**

We require a well qualified graduate able to teach Management Accounting to our CNAU undergraduates courses including Economics, Business Studies and in particular B.A. Accounting Studies.

LECTURER I/II IN LAW

In the School of Economics and Accounting with special reference to teaching Law on undergraduate and professional courses in economics and accounting.

Both posts are tenable from 1st April 1986.

*Salary: L1 £7,362-£12,265 inclusive
LII £9,114-£15,983 of London
S/L £12,998 to a possible maximum of £16,083 weighting*

Application forms and further details from The Staffing Office, Ealing College of Higher Education, St. Mary's Road, Ealing, London W5 6RF.

Closing date: 3rd February 1986

**Hereford and
Worcester
County Council
Worcester College
of Higher Education**

**APPOINTMENT
OF LECTURER
IN HOME
ECONOMICS**

A permanent full-time post is available from 1st April 1986, on an ad hoc basis, as a replacement, as from 1st April 1986, for the post of Lecturer in Home Economics. The successful candidate will be responsible for the teaching of home economics to first and second year students. The successful candidate will be expected to undertake research and to publish in the field. The successful candidate will be expected to undertake research and to publish in the field. The successful candidate will be expected to undertake research and to publish in the field.

**LECTURER II/
SENIOR LECTURER
AND TEACHER
ADVISER
IN BUSINESS
EDUCATION**

(With effect from 1 April 1986 if possible)

This is a joint appointment in association with the Keele University. The successful candidate will be responsible for the teaching of business education to first and second year students. The successful candidate will be expected to undertake research and to publish in the field. The successful candidate will be expected to undertake research and to publish in the field.

The appointment will be made at the Lecturer Grade II, or Senior Lecturer Scale (currently £23,076 per annum), according to qualifications and experience.

The College has approximately 1,000 students on full-time B.A., B.Ed., and B.Sc. degrees, PGCE, advanced diploma and higher degree programmes.

Education. The person nominated will have good qualifications in Mathematics together with the ability to teach algebraic structure and mathematical modelling. Experience in the history of mathematics, sound Primary School experience or research related to mathematics in the Primary curriculum would be an advantage.

Applications should be received not later than Monday 3rd February 1996 to the Principal, King Alfred's Grammar School, Winchester (Tel: 0962 628251), from whom further particulars may be obtained. (01955)

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Colleges of Higher Education continued

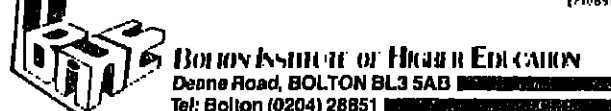
HEAD OF DEPARTMENT OF MATHEMATICS AND COMPUTING

(Grade V, £17,226 - £19,128)

Applications are invited for this post which is being re-advertised. The Department offers a range of full-time and part-time courses in mathematics and computing, including courses in Computer Studies leading to BTEC Higher National awards, and is responsible for the servicing of other courses across the Institute as a whole. The successful candidate will be expected to contribute substantially to the development of the Department's work, notably in relation to computer applications and information technology.

Further details and application forms are available from the Deputy Registrar to whom completed forms should be returned by Friday, 7 February 1986. Previous applicants are invited to re-apply.

(71081)



General Vacancies

HAMPSHIRE COLLEGE OF AGRICULTURE

Sparsholt, Nr. Winchester
(Principal: L. Norman M.Sc.)

DIRECTOR OF STUDIES

(Salary: £14,796 - £16,287)

Applications are invited from suitably qualified and experienced agricultural educationalists for the above post which is available immediately. This post is at a large Agricultural College offering full-time and part-time courses over a wide curriculum range.

Phone (096 272) 441 ext. 265 for details and application form. Closing date: 31st January 1986.

(74157)

Colleges and Departments of Art continued

The Royal Society

EDITORIAL ASSISTANT

An Editorial Assistant is required to work on the preparation of papers for the Society's journals, mathematical and physical journals. Candidates must have a first degree in mathematics, chemistry or physics, and a command of English. The successful candidate will be expected to contribute substantially to the development of the Department's work, notably in relation to computer applications and information technology.

The post is on the Administrative Assistant grade scale £7,093 to £10,574 per annum. Involvement in the initial salary will reflect age and relevant experience. Applicants with at least two years' experience may expect to be placed on the upper half of the scale. An satisfactory performance promotion may be expected in the course of the first year. The successful candidate will be expected to contribute substantially to the development of the Department's work, notably in relation to computer applications and information technology.

Applications with a CV (not MBE) should be sent to: Mr. N.B. Parfitt, Assistant Secretary (Finance and Establishment), The Royal Society, 1, Bedford House, Tavistock Square, London WC1P 8BT. Closing date: 31st January 1986.

(71082)

Overseas

Anglo-Portuguese Joint Research Programme (Treaty of Windsor)

In recognition of the long standing ties between Britain and Portugal, and at the point when Portugal is joining the European Community, a joint research programme for specific projects between Portugal and Britain has been initiated. As 1986 marks the 60th anniversary of the Treaty of Windsor, which is the oldest such agreement between any two member countries of the European Community, this scheme will be called the Treaty of Windsor Programme.

The British Council invites applications in all academic disciplines for inclusion in the 1986/87 programme (1 June 1986-30 April 1987). The scheme has been established with the Portuguese Ministry of Education and will be administered jointly by the Portuguese Councils of Rectors and Presidents of Polytechnics, and the British Council on behalf of British universities and polytechnics. Applicants must already have identified a Portuguese project partner who will be making a simultaneous application at the Portuguese end.

The scheme will be in two parts:

1. Advanced research projects carried out through collaboration between Portuguese universities and British universities and polytechnics.
2. Staff and curriculum development projects in the Portuguese polytechnics carried out through collaboration with British universities and polytechnics.

Application forms and further information on the scheme may be obtained from: Higher Education Division (Treaty of Windsor), The British Council, 10 Spring Gardens, London SW1A 2BN. Telephone 01-930 8466 (extension 2526).

The deadline for the return of completed forms is Thursday 27 March 1986.



Overseas continued



CUMBERLAND COLLEGE OF HEALTH SCIENCES

HEAD

School of General Health Studies

The primary role of the College is teaching and research in disciplines of the health sciences. The College offers honours degrees or diplomas in Speech Pathology, Medical Record Administration, Nursing, Occupational Therapy, Therapies, Physiotherapy and Rehabilitation Counselling. Graduate courses include Masters Degrees by research, Exercise and Sport Sciences, Nursing, Physiotherapy Speech Pathology.

The School of General Health Studies responsibilities include the conduct of courses in Rehabilitation Counselling, a certificate with programs in Aboriginal Health Studies, currently under development. The School will also be responsible for the inter-disciplinary components of the College's other programs and related developments.

The Head of the School will be responsible to the College Principal for the presentation and development of the courses offered by the Department, the conduct and growth of research programs and the management and development of the School staff within the terms of the College's policy of equal employment opportunity.

Doctoral qualifications with appropriate experience and a demonstrated capacity for leadership in an academic environment are essential requirements for the position. Preference will be given to applicants whose qualifications and experience are relevant to the health sciences.

CONDITIONS OF APPOINTMENT: The College reserves the right to fill the position by invitation. The salary will be at the applicable level (Head of School Level), currently \$45,100 per annum.

Attractive superannuation and housing loan schemes are available and opportunities exist for leave within the terms of the College's professional experience program. A contribution will be made towards the fares and removal expenses of overseas and interstate appointees and their families. Enquiries may be directed to the College Principal, telephone (02) 464 420.

Applications are invited in confidence.

The College Registrar will provide interested persons with application forms and general information on the College and the position.

Applications containing full details of qualifications and experience together with the names of at least three referees close on Friday, 4th April, 1986, with:

The Registrar
Cumberland College of Health Sciences
P.O. Box 170, Eidsvold, N.S.W. 2141, Australia.

The College has a policy of equal employment opportunity and selection is based on merit, and applicants are encouraged to apply regardless of sex, marital status, ethnic origin, etc.

PLEASE SEND CV WITH APPLICATION FORM TO THE REGISTRAR

Adviser in Technical Education

TETOC Group £18,365

TETOC Group is a specialist unit of the British Council used by the Council and the Overseas Development Administration of the Foreign and Commonwealth Office as their primary source of advice and operational support in a number of specialist areas of technical cooperation and training.

The Adviser will give advice to the Overseas Development Administration on technical education aid policies and projects in a range of developing countries; identify, implement and monitor aid projects and technical cooperation activities; provide consultancy services within Council projects funded by World Bank and other international agencies; advise on training in Britain for overseas trainees; maintain contacts with overseas governments and British resource institutions.

Responsibility for technical education work in particular countries will be assigned taking into account appointee's specific background and overseas experience. Post is London-based but up to 45% of the time will be spent on overseas assignments.

Applicants should have a good degree or equivalent qualification in a relevant subject area, practical experience in the British technical education sector and appropriate professional work experience in developing countries. Membership of appropriate professional bodies desirable.

Three-year contract renewable by agreement on Grade C (Senior Principal) scale. Starting salary £18,365 including London Weighting rising to £24,300. Non-contributory index-linked pension scheme.

For further details and an application form to be returned by 14th February write or phone quoting C/1 to Personnel Management Department, The British Council, 65 Davies Street, London W1T 2AA. Tel: 01-499 8011 ext. 3086 or 3123.

The British Council is an equal opportunities employer.



Overseas continued

Posts Overseas

Soviet Union

Lecturers in English for universities and institutions of higher education in Moscow and other major cities in the Soviet Republics.

Qualifications: degree, preferably in English, Russian or other Modern Languages, a TEFL qualification and two years' teaching experience. Single candidates preferred.

Salary: 400 roubles per month plus a sterling subsidy at the rate of £4,376 per annum, paid in Britain. Benefits: subsidised accommodation, superannuation contribution, fares and baggage.

Contracts from September 1986 for one academic year of 10 months. Renewable.

Closing date for applications: 7 February 1986.

Reference: NS 11 76/41 T11

For further details and an application form, please write, quoting the post reference number to: Overseas Educational Appointments Department, The British Council, 90-91 Tottenham Court Road, London W1P 0HT.



University of Natal

Department of Music

Durban

Applications are invited from suitably qualified persons for the post of Lecturer in Ethnomusicology.

The Department is a leading centre for Ethnomusicology research and has a strong academic staff.

The appointment carries an attractive salary package, derived from the Staffing Scheme, on which the successful applicant will be determined according to the qualifications and/or experience of the successful applicant.

Application forms, further particulars of the post and information on pension, medical aid, group insurance, staff bursary, housing loan schemes, long leave conditions and travelling expenses on first appointment are obtainable from the Secretary, South African Universities, 378 High Road, Durban, Natal, South Africa.

Applicants should send their applications, on the prescribed form, to the Registrar, University of Natal, 1st King George V Avenue, Durban, Natal, South Africa, with whom applications, on the prescribed form, should be lodged not later than 28 February 1986, quoting the reference D2/86.

Further particulars and application forms may be obtained from The Principal, The College of St. Paul and St. Mary, School of Geography and Geology, 100 St. Paul's Road, Durban, Natal, South Africa.

Appointments will be from 1 September 1986 on the Lecturer II scale.

Further particulars and application forms may be obtained from The Principal, The College of St. Paul and St. Mary, School of Geography and Geology, 100 St. Paul's Road, Durban, Natal, South Africa.

Appointments will be from 1 September 1986 on the Lecturer II scale.

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Continuing Education

Co-ordinator

Curriculum Development

Bristol based - up to £19,000 p.a.

The National Health Service Training Authority directs research, education and training policy for all staff within the National Health Service.

The Authority now wishes to recruit a high-calibre specialist to co-ordinate curriculum development for a £500,000 national project jointly funded by the NHSTA and the Department of Education and Science. The project, involving a vocational education scheme for groups of NHS care professions, is designed for a fixed term of about two years, and would be suited to a professional wishing to work on a freelance, secondment or contract basis.

To apply you will have a substantial background in teaching and course development within the Higher Education field, and experience in leading a National Scale project. Expertise in curriculum theory, design and evaluation is essential, and a background of work with professional groups - preferably in the health field - is highly desirable.

The post is Bristol based, but will involve considerable travel nationwide.

For informal discussion about this post, please contact Carole Evans or, for an application form and further written details, ask for Hazel Thorpe - telephone Bristol (0272) 291029 NHS Training Authority, St. Bartholomew's Court, 18 Christmas Street, Bristol BS1 5HT. Applications should be returned by 7 February 1986.

NHS Training Authority



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Literally millions of children have been helped by the NSPCC with over 80% of income coming from public generosity. To maintain these vital services to children we're asking for your support by making a special seasonal offer - a full colour map of the world printed by the famous map makers, John Bartholomew.

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NSPCC

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Reviews of Academic Journals

June	13 Social Sciences and Humanities
Sept	26 Sciences and Engineering

Special Features

March	21 Management Education - a feature which will also include reviews of business and management books. (Copies to be distributed at The Association of Teachers of Management Conference March 24-26).
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June	20 Women's Studies (Copies to be distributed at the Second International Feminist Book Fair June 22-27).
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July	4 Industry and Higher Education
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March	14
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June	27
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Nov	7
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Information Technology	
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Colleges and Departments of Art

LONDON BOROUGH OF MERTON WIMBLEDON SCHOOL OF ART

Following the retirement of the present Principal, Mr. M.F.M. Murphy, on 31st August, 1985, the Governors invite applications for the post of

PRINCIPAL

The School conducts courses in Art and Design at MA, Postgraduate Diploma, BA(Hons.), and DipHE Level, and in Foundation Studies. It is graded Burnham Grade 4.

Application forms and full particulars may be obtained from the Director of Education and Recreation, London Borough of Merton, Education Department, 10th Floor, Crown House, London Road, Morden, Surrey SM4 6DX - Tel. 01-545 3263, to whom completed applications should be returned by 31st January, 1986.

(71083)



WEST SURREY COLLEGE OF ART AND DESIGN

Group 5

Principal

Salary range £21,876 - £22,892 plus London Fringe Allowance £264.

Applications are invited from candidates with suitable qualifications and experience for the post of Principal which is vacant following the sudden death of Mr. John Morris.

The College has extensive local, national and international links and is one of the foremost and largest non-metropolitan art institutions in Britain. The College provides 11 chief study specialisms based in 4 APE Departments plus a Foundation Department enrolling 120 students.

Generous relocation expenses in approved cases. Assistance with temporary housing may be available.

Further details and application form available, on receipt of SAE, from the County Education Officer (F&MD), County Hall, Kingston upon Thames KT1 2DJ. Closing date 31 January 1986.

(74182)

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